

The AAO

FORUM FOR OSTEOPATHIC THOUGHT

JOURNAL

Official Publication of the American Academy of Osteopathy®

TRADITION SHAPES THE FUTURE

VOLUME 23 NUMBER 4 DECEMBER 2013



Potential New Dimensions in Dermatology...pg. 34

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About the artist for the September AAOJ cover:

Jordan Blumer is a 19-year-old aspiring artist. She graduated from Corvallis High School (Corvallis, OR) in 2012 with but two visual arts classes under her belt and has yet to enter college. Having grown up with doctors as parents, she pulls much inspiration from the medical field. After they left an anatomy textbook lying around one day, she stole it away and discovered a new passion in anatomical drawing. Although her favorite medium is compressed charcoal, she has explored everything from jewelry-making and metalwork to creating her prom dress out of duct tape.



Cover photo by Dr. Kate McCaffrey, Ashland, Oregon, ©2013.



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Classified	\$1.00 per word		



View from the Pyramids

It Takes an Osteopathic Village

Kate McCaffrey, DO

Dear Colleagues,

I would like to welcome to our *AAO Journal* our new Associate Editor, Katherine A. Worden, DO. Dr. Worden is an associate professor in the OMM Department at AZCOM and is from Michigan. We are fortunate to have a talented and sage osteopathic physician join our editorial staff. I would also like to acknowledge the many dedicated AAO Publication Committee Members for their editorial assistance and guidance. Thank you to Dr. Brian Kaufman, Dr. Claire Galin and Dr. Ray Hruby for recruiting authors and editing numerous articles. I would like to ask you, my colleagues, to please continue your efforts to recruit and refer both experienced and new writers and researchers to submit their work to the *AAOJ*—we can make this journal successful with everyone’s help! **This is your journal and this is our history—let’s create this story together!**

This December 2013 *AAOJ* is interesting and thought provoking. It includes a touching article about the benefits of regular osteopathic manipulation and care over two lifetimes. Through Dr. Uhrig’s article, *A Tale of Two Sisters: An Osteopathic Story*, I am reminded of the health that regular osteopathic medical care provides our patients.

Dr. Baker’s case study re-engages us on a deeper level with neuroanatomy and the interconnectedness between Osteopathy in the Cranial Field, HIV and the Ramsay Hunt Syndrome. He concludes with proposing research on this topic on a larger scale.

Welcome to our osteopathic medical student contributors! Please read Student Doctors Kathleen M. Vazzana, OMS IV; Vivian Chan, OMS II; Charles Wenzel, JD, OMS IV; and their Attending, Dr. Sheldon C. Yao’s, analysis of a summer SAAO Program’s impact on the perception of OMT. Kudos to Ana M. Michunovich, BS, OMS III, and her mentor, Dr. Robert Stern, for the reminder of how a balanced nervous system aids in overall health, decreases the allosteric load and its coetaneous manifestation. Well done students! Keep researching!

In his usual and engaging style, Dr. Pribadi continues to challenge our profession to expand its vision of osteopathy and where it fits into other modalities and diseases such as “leaky gut” syndrome, food intolerances and Eastern Medicine.

And finally, I would like to draw your attention to the numerous CME opportunities coming your way this year and next in the beautiful state of Colorado and beyond!

Respectfully,

Kate M.

CME QUIZ

The purpose of the quiz, found on page 13, is to provide a convenient means of self-assessment for your reading of the scientific content in “Use of OMT to Treat Patient with Ramsay Hunt Syndrome and HIV: A Case Study” by Joshua P. Baker, DO, FAAFP.

Please answer each question listed. The correct answers will be published in the March 2014 issue of the *AAOJ*.

To apply for Category 2-B CME credit, record your answers to the *AAOJ* CME quiz application form answer sheet on page 13. The AAO will note that you submitted the form, and forward your results to the AOA Division of CME for documentation. You must score a 70 percent or higher on the quiz in order to receive CME credit.

Looking Back and Looking Ahead

Katherine A. Worden, DO, MS

Hello!

This fall has been a busy osteopathic season. I am honored to have joined the team here at the *AAO Journal* with Dr. McCaffrey, Lauren Good and the Publications Committee. I would like to thank Dr. Seffinger for the nudge to volunteer for the *AAO Journal*, and I am excited about its future!

I want to share with you a snapshot of my last two months...and a vision. This past September I traveled to my 25th reunion from MSUCOM in East Lansing, MI, where it was great to visit old friends, swap adventures, and, of course, to watch the Spartans win! I thought it was high time we presented visceral treatment to Michigan doctors and presented a workshop on the treatment for the “Michigan Nose” that was well received. Our AZCOM OMM Department Journal Club met to discuss the new 10-year Strategic Plan for Osteopathic Research. We also discussed the multi-site study on Counterstrain tenderpoint frequency in osteopathic medical students headed by the Kirksville team. Kudos to all! We graduated our first NMM Plus One Resident from our new program, Greg Heller, DO, who won his division of the AAO Research Poster Contest at Convo in the Spring.

In early October Edna M. Lay, DO, FAAO, FCA, and the SCTF faculty visited AZCOM and presented an Intermediate Cranial Course. This was Dr. Lay’s final teaching venture, and we were grateful to her for all of her teachings over the years. We also convened a committee to develop an OCA-approved 40-hour Basic Cranial Course on campus for students.

In mid-October I finally made my visit to “the Mothership,” A.T. Still University in Kirksville, MO. Brian L. Degenhardt, DO, and his team met to continue to build a Osteopathic Physician-Based Research Network (PBRN) which you may have heard of as DO-Touch.Net. This network will allow our researchers to develop clinical studies with larger numbers of subjects by combining data from multiple sites. This forward thinking involves building an infrastructure in our profession from which better research may be accomplished. If you or others you know are interested in joining this network, contact Dr. Degenhardt directly at bdegenhardt@atsu.edu.

What fun to drive down Osteopathy Street in Kirksville, have your picture taken with the Statue of the “Old Doc” on the town square, see the preserved log cabin and first school of Osteopathy, and gaze upon the walls of the room in which we were meeting to see a picture of a young Louisa Burns, DO, and the original portrait of W. G. Sutherland, DO—yes that one! The highlight of the trip, however, was sitting in the back room of the local watering hole, the Wooden Nickel, on Saturday night being enthralled by stories of the early days of Osteopathy told by Jason, the curator of the Museum of Osteopathy. Recent discoveries have led to new mysteries, such as *What did A.T. have inside those boots all those years and why?*

In November I was one of many DOs recruited to help administer the NMM/OMM Board Exams to a large class of 50+ who are seeking Board Certification.

Why do I share all this with you? So that you may take heart that Osteopathy is alive and well and growing... in our treatment rooms, on our campuses, in our residencies, and in our present and future research endeavors. Do we continue to have unique challenges in the current medical climate? *Absolutely*. But we are producing the largest and perhaps the brightest generation of DOs who will help us to find creative ways to meet those challenges. It is our job as mentors to keep them inspired and engaged in growing their osteopathic hands and hearts. It is time for osteopathic physicians to create stepping stones rather than roadblocks for this next generation to learn of their rich heritage, develop their osteopathic skills and lead us into the future.

It is the *AAO Journal’s* collective vision to fill a needed void in developing new writers and researchers. We would like to continue to record osteopathic history as it happens. Each issue strives to be a snapshot of current events affecting our profession. If you have ideas about how to make this Journal even better or to submit an article, feel free to contact the *AAO Journal* Editor at editoraaoj@gmail.com.

Thanks for listening...

Kate W.

Mark your calendar for these upcoming Academy meetings and educational courses.

All times local.

2014

January 1	FAAO Applications Due
January 29	COFAAO Web Conference, 8:30 pm
TBD	Membership Committee Teleconference
February 1-2	Board of Trustees' Strategic Planning Meeting—AAO Offices, Indianapolis, IN
February 7-8	Education Committee Meeting—1:00 pm, AAO Offices, Indianapolis, IN
February 14-16	<i>Basic Percussion Course</i> —Richard W. Koss, DO—TCOM, Fort Worth, TX
March 15-18	<i>New Approach to Osteo-Articular Manipulations Including the Superior and Inferior Limbs (Pre-Convo)</i> , Jean-Pierre Barral, DO (France); Kenneth J. Lossing, DO—The Broadmoor, Colorado Springs, CO
March 17-18	<i>Osteopathic Approach to Common ENT Complaints of Childhood (Pre-Convo)</i> —Heather P. Ferrill, DO, The Broadmoor, Colorado Springs, CO
March 17-18	<i>Fascial Distortion Model (Pre-Convo)</i> —Todd A. Capistrant, DO, The Broadmoor, Colorado Springs, CO
March 18	COFAAO Meeting—The Broadmoor, Colorado Springs, CO
March 19	Board of Trustees Meeting—8:00 am, The Broadmoor, Colorado Springs, CO
March 19	Board of Governors Meeting—1:00 pm, The Broadmoor, Colorado Springs, CO
March 19-23	AAO Convocation— <i>Trauma: An Integrated Osteopathic Approach</i> Denise K. Burns, DO, FAAO, Program Chair—The Broadmoor, Colorado Springs, CO

Dr. Robert C. Fulford's Basic Percussion Course

February 14–16, 2014 at TCOM

Course Description and Background:

At Dr. Fulford's last course in May of 1997, he expressed his desire to leave his ailing body after his scheduled presentation to the Cranial Academy in June. After demonstrating what he was going to present to the Cranial Academy, he asked Dr. Koss (**Program Chair**) and Dr. Rajiv L. Yadava to continue teaching his work to the Osteopathic profession. Dr. Fulford passed away four days after the Cranial Academy presentation.

This course has been restructured to provide the participant a more complete understanding and experience of Dr. Fulford's contributions to Osteopathy. Although hand and percussion techniques are included, the course emphasizes increasing the clarity of one's working knowledge. Based on the participant's inclinations, there is freedom within the curriculum to change the direction of what information is relayed. Time needed to assimilate what is taught will also be respected.

Prerequisites:

This Level III course is for DOs, MDs, dentists and students with a **40-hour approved Cranial course** and/or **prior training and experience**



Robert C. Fulford, DO

in **Cranial Osteopathy** or permission from the program chair.

Course Objectives:

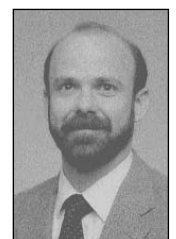
- One will recognize that many of Dr. Fulford's ideas are rooted in Dr. Still's and Dr. Sutherland's teachings;
- One will begin to see that the results realized from the use of the percussor is directly dependent on the osteopath's understanding;
- One will see that the use of the percussor will save the physician time and energy; and
- One will appreciate that Dr. Fulford gave more to Osteopathy than a new technique.

CME:

22 hours of AOA Category 1-A credit is anticipated

Course Location:

Texas College of Osteopathic Medicine
3500 Camp Bowie Blvd.
Fort Worth, TX 76107
(817) 735-2000



Richard W. Koss, DO

Click here to register online.

A Tale of Two Sisters: An Osteopathic Story

Lawrence M. Uhrig, DO

Here is a nice anecdotal story of two sisters who have walked this earth for nearly two centuries between the two of them. Dorothy has been a patient in my practice for over 55 years, getting regular osteopathic treatments and, rarely, medical treatment for minor illnesses. I have treated her for the 23 years that I have been in this office with my traditional osteopathic practice. I have treated Dorothy with thorough osteopathic manipulation on a monthly basis for my entire career.

Dorothy is an elegant 95-year-old woman who is very active with church activities, shopping, socializing and going out to eat with friends almost daily. She walks fully upright, has very few complaints about arthritis, back aches or internal problems but does carry a cane in case she needs it in her daily activity. She has been treated in the office where I currently work since the late 1950s when Herbert C. Miller, DO, FCA, and William Rankin, Sr., DO, worked here. William Rankin, Jr., DO, treated her following his father's death in 1965, and I started treating Dorothy in 1990 when I joined Dr. Rankin, Jr.'s, practice. Dorothy is a model patient, never forgetting her appointments, still driving and living by herself, always very pleasant to treat and thankful for what Osteopathy has done for her over the years. She has enjoyed a tremendously healthy life with only recent periodic heart irregularity and an episode of shingles. Little else has ever troubled her.

Dorothy's older sister, Violet, is 97 years old and also is a very pleasant woman to chat with and visit.

Violet has never been treated in our office and, other than some regular flu vaccinations, has never been treated by me for any medical issues. She sees another primary care physician to help her deal with a number of medical and musculoskeletal issues. Violet has, therefore, never received osteopathic care during her near century on earth.

Other than occasional visits to church on Sunday, Violet rarely leaves her house. She sits in a recliner most of the day and uses a walker to ambulate what little she is able to. She has a typical stooped osteoporotic posture with ambulation. She is not able to walk far or carry much weight due to her weakness, spinal compression and osteoarthritis restrictions.

So, we have an anecdotal comparison of two sisters who have received different approaches to their health care during their lives. We know that Osteopathy was founded on the principles of A.T. Still to maintain health as much as possible by working to improve circulation and optimize mobility as close to normal as possible. Certainly genetic and environmental forces can influence health in many ways but it is a wonderful consideration that, at least in Dorothy's case, Osteopathy has probably allowed her to enjoy better health and mobility and maximize her ability to get the most out of what life has had to offer. Dorothy and Violet are both wonderful people to know, and hopefully, both have more healthy years ahead.

Thank you, Dr. Still!



Above: Dorothy in the office.

Right: Dorothy and Violet.



Use of OMT to Treat Patient with Ramsay Hunt Syndrome and HIV: A Case Study

Joshua P. Baker, DO, FAAFP

Abstract

A 31-year-old male presents with a skin rash on a few locations on his left ear and left forehead. A presumptive diagnosis of impetigo is made and treatment is initiated. Several days later, the same patient returns with facial paralysis on the side of the skin lesions. A diagnosis of Ramsay Hunt syndrome is made and then confirmed through tissue pathologic analysis and PCR analysis. Ramsay Hunt syndrome, the reactivation of herpes zoster virus within the geniculate ganglion of the facial nerve, presents with a variety of facial nerve pathologies including skin rash and facial paralysis as it did in this case. It can present with a variety of other cranial nerve neuropathic presentations, as it did in this case as well. Adjuvant treatment with osteopathic manipulative treatment (OMT) was initiated at the onset of the facial palsy. HIV patients with Ramsay Hunt syndrome have showed to have a propensity to more severe neurologic symptoms and complications. In this case, the patient resulted in complete resolution of all his symptoms.

Presentation of a Case

A 31-year-old Caucasian male presented February 2013 on day two of a rash on his left forehead and left ear that began simultaneously. Both lesions appeared as scab-like, the ear lesion as mildly pruritic in his ear canal with erythema around the lesion, while the forehead lesion was asymptomatic. The patient denied burning, stinging, bleeding, pain, vertigo, dizziness, weakness, headache, fevers, chills, sweats, hearing loss, tinnitus and facial paresthesias. He felt completely normal except for this new rash. He also presented on day two of a sore throat with mild odynophagia, which he stated was comparable to when he had previously been diagnosed with thrush. His physical exam was unremarkable with the exception of the three below regions:

1. Left forehead: scabbed over papule 3 mm x 3 mm with tenderness to palpation. No fluctuance, surrounding redness, honey-crusted scale, discharge, hyperesthesia, purulence, vesicles.
2. Left Ear: tender, fluid-filled 2 mm x 2 mm pustule on antihelix with associated honey-crusted plaque involving antihelix around the pustule

approximately 1 cm x 1 cm with ear redness in this region. The scale also spread from the antihelix to the concha and into the lateral one-fourth of the superior aspect of the ear canal. Where the crusting had been removed in the ear canal (due to pruritus), there was underlying erythema. No induration, fluctuance, warmth, edema, clear fluid filled vesicles, hyperesthesia,

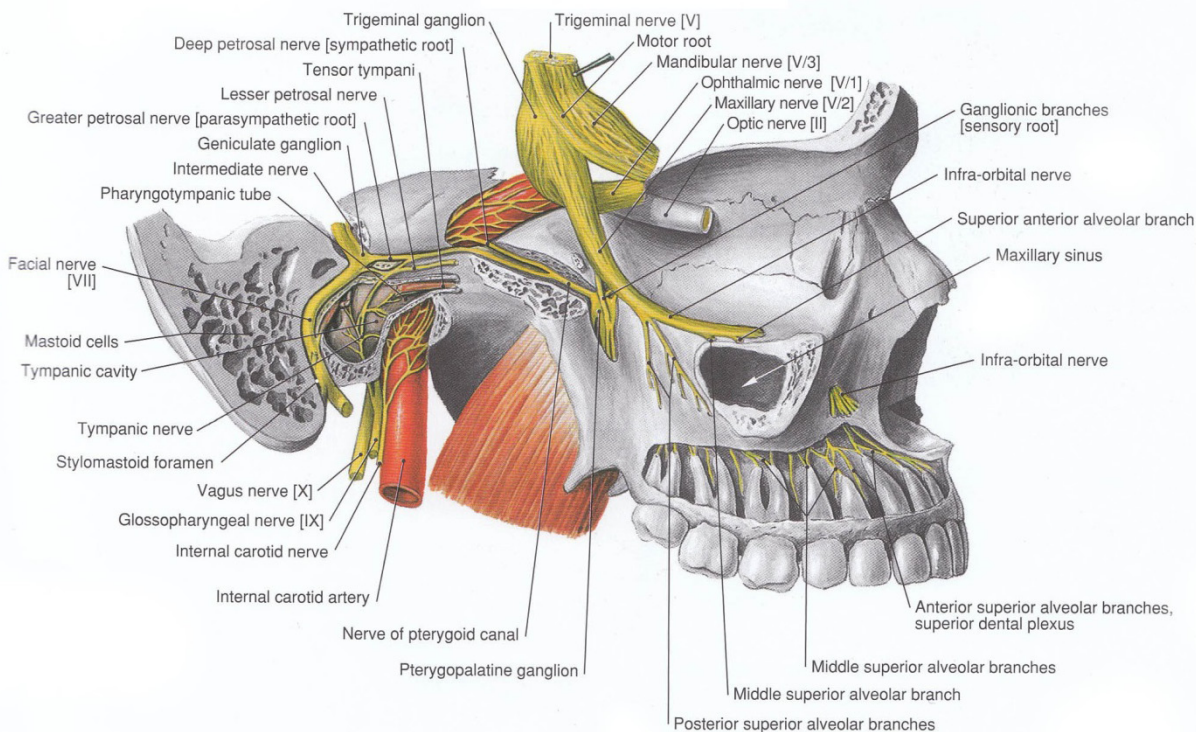


Figure 171. Pterygopalatine ganglion. Putz, Pabst: *Atlas of Human Anatomy* ©Elsevier GmbH, Urban & Fischer, Munich.

bleeding, discharge, tympanic membrane abnormalities.

- ENT: diffuse bilateral pharyngeal erythema with scattered white plaques.

The patient's medical history included a diagnosis of human immunodeficiency virus (HIV) made August 2012 with initiation of highly active antiretroviral treatment (HAART) at that time. His presenting illness August 2012 was an AIDS-defining illness: pneumocystis jiroveci pneumonia. The remainder of his medical, surgical, allergy, alcohol, tobacco and social history was unremarkable.

The patient reported that his most recent CD4 count was normal. (Those records are unavailable to the author.) Current medications included Reyataz (atazanavir) 300 mg PO once daily, Truvada (emtricitabine/tenofovir disoproxil) 200 mg/300 mg PO once daily, and Bactrim DS (trimethoprim/sulfamethoxazole) 160/800 PO once daily.

The initial short list assessment of this skin rash included impetigo, varicella-zoster virus (VZV) and herpes simplex virus (HSV). The pharyngeal abnormality was consistent with oropharyngeal candidiasis and less likely esophageal candidiasis. These skin lesions were highly consistent with impetigo. He lacked multiple symptoms that are usually present in VZV or HSV, namely paresthesias, tingling, hyperesthesias, pain, burning, stinging and clear fluid filled vesicles. Other more severe symptoms may have included facial nerve palsy, tinnitus, hearing loss, vertigo, dizziness, conjunctivitis, photophobia, vision changes, eye pain and other eye symptoms. Additionally, the location of the lesion on his forehead was in the distribution of ophthalmic division of the trigeminal nerve (V₁), and the ear lesion was on the mandibular division of the trigeminal nerve (V₃) and possibly may have involved the facial nerve (CN VII) at the ear canal. This would make HSV unlikely and would make VZV multidermatomal in nature; which is uncommon.

The treatment plan included the following: fluconazole (Diflucan) 100 mg PO once daily for 30 days (first dose of 200 mg followed by 100 mg on subsequent days); Nystatin 100,000 units/mL suspension 5 ml rinse and swallow four times per day for 10 days; mupirocin topical (Bactoban) 2% ointment applied topically to affected areas three times daily for 14 days.

On day nine of the illness, the patient returned to the office because he noticed a two-day progressively worsening left facial paralysis which included the

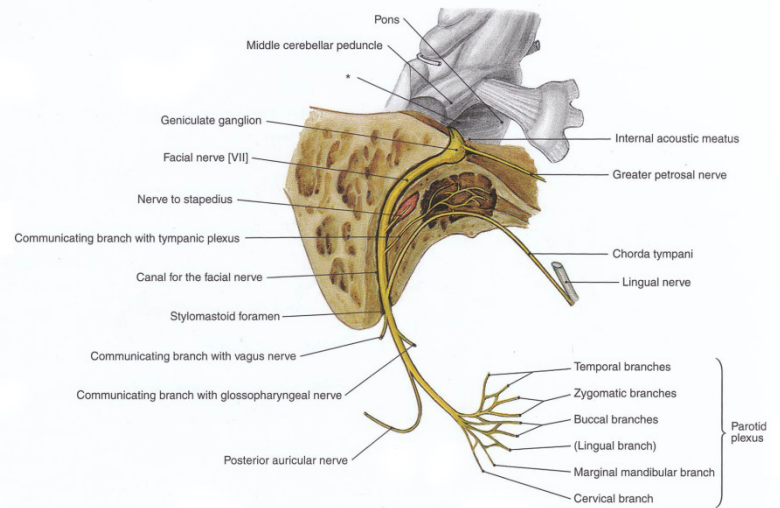


Figure 1181. Facial nerve VII; the facial canal and tympanic cavity have been opened; viewed from the right. Clinical term: cerebellopontine angle. Putz, Pabst: Atlas of Human Anatomy ©Elsevier GmbH, Urban & Fischer, Munich.

inability to close the eye, puff out his cheeks, smile and frown. The pharyngeal pain had completely resolved. The forehead lesion was still scabbed over and asymptomatic. The ear lesion had resolution of the redness, resolution of pruritus, significant decrease of scaling/crusting, and he was otherwise feeling well. His review of systems was negative for vision problems, eye pain, red eye, photophobia, eye symptoms of any kind, vertigo, tinnitus, dizziness, ear pain, ear drainage, palate pain, tongue paresthesias, taste problems, facial paresthesias, headache, fevers, chills, and sweats. He was feeling completely normal despite this new onset facial nerve paralysis.

A presumptive diagnosis of Ramsay Hunt syndrome (reactivation of varicella-zoster virus within the geniculate ganglion of the seventh cranial nerve) was made. Evaluation included lesional swab of the forehead and ear lesions for HSV and VZV, molecular detection, polymerase chain reaction (PCR), dermal, and complete excision of the left forehead lesion sent for pathologic analysis. His new treatment included acyclovir (Zovirax) 800 mg PO five times daily for seven days; Prednisone 9-day taper (50 mg PO once daily for five days, 40 mg x 1 day, 30 mg x 1 day, 20 mg x 1 day, 10 mg x 1 day); Systane brand ophthalmic lubricant due to inability to close his eyelid completely; initiation of osteopathic manipulative treatment (OMT) and discontinuation of topical mupirocin (Bactroban). A detailed description of somatic dysfunctions and OMT provided will be addressed in the discussion section of this article to follow.

On day 11, the HSV and VZV, molecular detection, PCR, dermal test resulted in the detection of varicella-zoster virus DNA.

By day 17 (postoperative day eight), the wound on the patient's forehead was well healed, and sutures were removed. The skin lesion on his ear was completely resolved. He never used the ophthalmic lubricant, as he was able to fully close his eye in a matter of days after he was seen on day nine of the illness. He reported he was unable to notice his facial palsy. His physical exam was consistent with a normal appearing forehead and ear. His facial palsy was nearly resolved but still perceptible to a detailed exam. OMT was performed.

On day 18, the pathology report on the forehead lesion revealed a benign ulcer with no evidence of herpes virus cytopathic effect seen, namely viral inclusions.

On day 24, a recheck in the office was performed, and he was unable to perceive the facial palsy. Upon exam during his normal conversation, the palsy was imperceptible. Detailed examination revealed a mildly perceptible facial asymmetry when he smiled, frowned and furrowed his eyebrows with maximal intensity. OMT was performed.

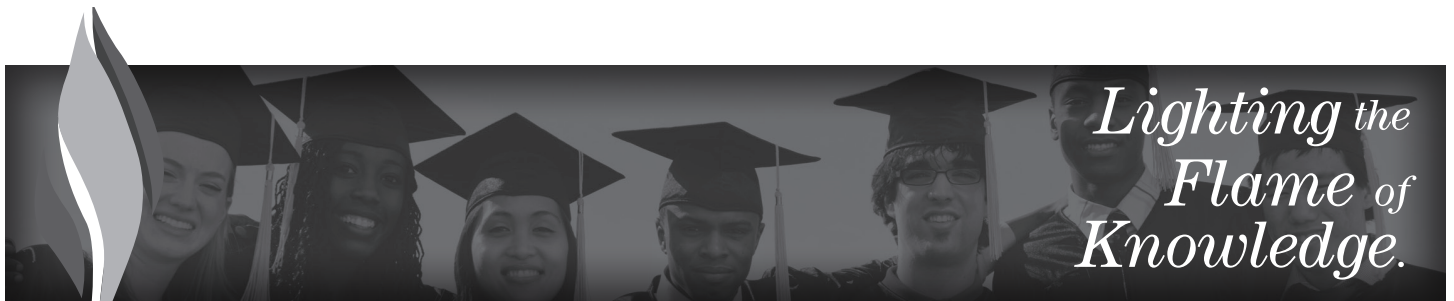
On day 31, a recheck in the office revealed a complete resolution of any facial asymmetry on detailed exam. OMT was performed.

Rechecks were again performed on days 38 and 45 to perform OMT. On day 45, resolution of his key lesion was noted prior to initiation of OMT. At that point, no further evaluation or treatment was recommended. At day 45, his symptoms were completely resolved, his key somatic dysfunction was no longer present, and no further follow up was recommended for this problem.

Clinical Discussion: Ramsay Hunt Syndrome

Ramsay Hunt syndrome (RHS) is reactivation of the herpes zoster virus originating from the geniculate nucleus of the facial nerve (CN VIII) that is located within the facial canal within the temporal bone.¹

Typically, RHS presents with unilateral facial paralysis, neuropathic pain and eruption of herpetic vesicles within the distribution of the sensory innervations from the afferent facial nerve fibers. Other typical presentations include tinnitus, vertigo and hearing loss due to the juxtaposition of cranial nerves VII and VIII in the facial canal. Multiple, less typical manifestations include various neuropathies of the following nerves presented in decreasing frequency: vestibulocochlear nerve (CN VIII), glossopharyngeal nerve (CN IX), trigeminal nerve (CN V), vagus nerve (CN X) and abducens nerve (CN VI). Additionally, the presentation of RHS in patients with HIV is known for its more severe neurologic pathology and is also found to result in greater neuropathic sequelae.^{1,2,3,4}



Philadelphia College of Osteopathic Medicine (PCOM) brings to light a rich tradition of excellence in education and leadership. Currently, the Georgia Campus—Philadelphia College of Osteopathic Medicine, in the greater Atlanta area, has the following exciting positions available:

Faculty Position: Department of Osteopathic Manipulative Medicine

Full time faculty position in the Department of Osteopathic Manipulative Medicine. This individual will be expected to teach osteopathic medical students in both lecture and laboratory sessions in all four years of the curriculum, see patients and develop an outpatient clinic for M-3 month long rotation, plan and supervise OMM Inpatient Student Service, assist in preparation of OMM video clips and tutorials, participate in existing research and initiate new OMM research, assist in planning and production of new publications, and assist in planning and supervision of the OMM Residency. The successful applicant will have a D.O. degree and proficiency in osteopathic manipulative medicine. The candidate needs to have or be eligible for a license to practice Osteopathic Medicine in the State of Georgia. Board Certification or eligibility by the AOBNMM or AOBSPOMM is required. Additional Board Certification or eligibility by the AOBFM is desirable. The review of applications will begin immediately and continue until the position is filled. Salary for this position will be commensurate with experience and qualifications.

Clinical Education Coordinator

Seeking qualified Osteopathic Physician for a full-time Clinical Education Coordinator. This full time position reports to the Chair of Undergraduate Clinical Education. This individual will be responsible as the Director of the Advanced Clinical Skills Program. He/She will supervise the Clinical Adjunct Faculty's participation in the didactic educational programs and assist the Chair in management of the Clinical Clerkship program. Minimum of five years in a clinical practice. Experience in clinical education as a Clerkship Director, Program Director, Didactic Educator, or similar activities. Must be Board Certified in a Primary Care specialty.

To apply for these positions, send via E-mail a personal statement describing interest in and qualifications for this position, a curriculum vitae, and names and addresses of three references, preferably from current or former supervisors.

All inquiries must include salary requirements and should be directed to: **Department of Human Resources, GA-Campus, 625 Old Peachtree Road, Suwanee, GA 30024. Call (678) 225-7515; Fax (678) 225-7519; Email: hr@pcom.edu** EOE



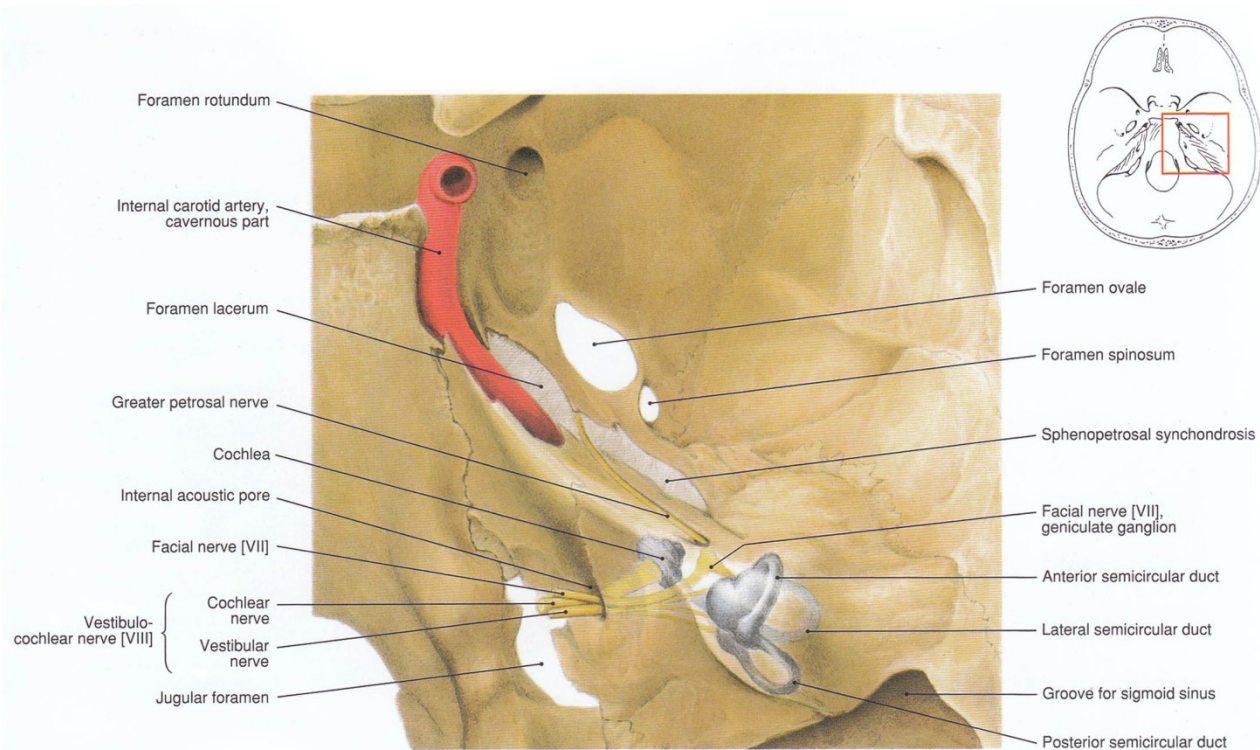


Figure 1411. Inner ear with the facial nerve and the vestibulocochlear nerve; projected onto the petrous part of the temporal bone; superior view. Putz, Pabst: *Atlas of Human Anatomy* ©Elsevier GmbH, Urban & Fischer, Munich.

Information regarding Ramsay Hunt syndrome in patients with HIV is limited. The author located a total of eight other cases in the literature that reported a variety of signs/symptoms as well as varied final outcomes. There is only one other case report to date of a patient recovering with complete resolution and without sequelae.⁵

The standard treatment for Ramsay Hunt syndrome is early initiation of systemic antivirals that are typically used for varicella-zoster virus such as acyclovir (Zovirax) in addition to the use of systemic corticosteroids (such as prednisone) in a variety of dosing schedules.^{6,7}

There is a lack of recommendations for the treatment of a facial nerve palsy from RHS, but there are other treatment options for idiopathic facial nerve palsy that include the following: acupuncture, physical therapy, occupational therapy, biofeedback, osteopathic manipulative treatment and neuromuscular re-education. Surgical intervention, in the form of decompression, is not recommended in RHS due to the typical presence of “skip” regions and diffuse neuritis of the facial nerve.^{8,9,10,11,12}

The patient in this case study had signs/symptoms that involved multiple nerve distributions

- Facial nerve (CN VII)
 - » skin lesions in the ear canal
 - » facial palsy

- Mandibular division of trigeminal nerve (V₃)
 - » skin lesions on the ear antihelix and concha
- Ophthalmic division of trigeminal nerve V (V₁)
 - » skin lesion on the forehead

This patient received delayed initiation of antiviral and systemic corticosteroid administration due to the atypical presentation but did receive them nonetheless. Aside from the delayed initiation of those medications, no deviation from standard care was identified.

Clinical Discussion: Use of OMT in Ramsay Hunt Syndrome

Adjuvant therapy with OMT was utilized in this case study. This patient demonstrated repeated ipsilateral temporal bone dysfunctions, which were the key lesions. There was no pattern to the specific dysfunction. Occasionally, it was found internally rotated and at other times it was externally rotated. There was no more specific pattern noted than the repeated ipsilateral temporal bone dysfunction itself.

In total, he received OMT on six occasions, days 9, 17, 24, 31, 38 and 45 of the illness.

OMT was performed on multiple body regions during each treatment session, utilizing multiple treatment modalities, with a focus of Osteopathy in the Cranial Field mainly on the head and sacrum. As previously mentioned, the ipsilateral temporal

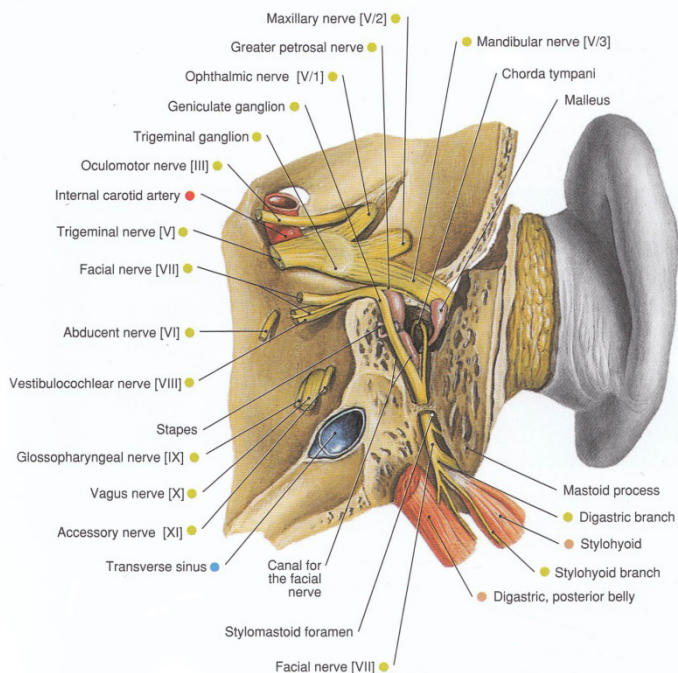


Figure 1429. Facial nerve within the petrous part of the temporal bone; the petrous part of the temporal bone, as well as the facial canal and the tympanic cavity, have been partially opened; posterior view. Putz, Pabst: *Atlas of Human Anatomy* ©Elsevier GmbH, Urban & Fischer, Munich.

bone dysfunction appeared to be the key lesion throughout this healing process. Compared to the other dysfunctions present in each treatment session, the temporal bone dysfunctions were more severe and required more time to treat until resolution. These difficult dysfunctions always responded to treatment during each treatment session. Direct and indirect treatment modalities (with a personal preference toward indirect by the provider) were utilized. There was no pattern noted about what types of treatments were more effective. On some occasions, direct treatments were most effective while at other times, indirect treatments were effective. On some occasions, both types of treatments were needed.

Upon review of the medical literature, there are no case reports involving the use of OMT for a facial nerve palsy induced by Ramsay Hunt syndrome. There are other publications regarding the use of OMT in other known causes as well as in idiopathic facial nerve palsy. Two of these publications note ipsilateral temporal bone dysfunctions being prevalent, similar to this case report. One other publication notes the absence of this finding altogether.^{13,14,15}

Conclusions

RHS may present in a variety of ways, especially in HIV, thus requiring the osteopathic physician understand the cranial nerves' structure and

functions. This will then enable correct recognition of neuropathies. The addition of OMT as adjuvant treatment for RHS is based upon the principals of osteopathic medicine. In particular, Osteopathy in the Cranial Field has potential for a beneficial outcome in patients who present in this manner. Treatment of the patient's cranial dysfunctions can assist in the normalization of somatic complaints.

The patient in this study had a magnificent end result with complete resolution of all his symptoms following all the treatments; however it is not scientific to claim that OMT was the reason he had such an astounding outcome. This case exemplifies one approach and could provide a framework for further study in the hopes that over time patterns and consistencies that can help guide osteopathic physicians can be established.

Acknowledgements: The author would like to acknowledge Tony Nguyen, MLIS, for his expertise in literature search.

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continued on page 17

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Publication: *AAOJ*, Volume 23, No. 4, Dec. 2013, pp. 8-12

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Answers to the December 2013 *AAOJ* CME quiz will appear in the March 2014 issue.

Mail this page to:
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1. Ramsay Hunt syndrome is a reactivation of the herpes zoster virus within which nerve body?
 - a. Genuiculate ganglion of the facial nerve (cranial nerve VII)
 - b. Trigeminal ganglion of the trigeminal nerve (cranial nerve V)
 - c. C2 Dorsal root ganglion
 - d. Pterygopalatine ganglion (also known as sphenopalatine ganglion) of the facial nerve (cranial nerve VII)
2. Ramsay Hunt syndrome may present with the following symptoms except:
 - a. Unilateral facial muscle paralysis
 - b. Vesicular rash in the ear canal
 - c. Vertigo and hearing loss
 - d. Anosmia
3. Which Osteopathic manipulative treatments would be reasonable to apply on a patient with Ramsay Hunt syndrome and a unilateral facial muscle paralysis who also presented with an ipsilateral internally rotated temporal bone?
 - a. Direct treatment augmenting external rotation of the dysfunctional temporal bone
 - b. Indirect treatment augmenting internal rotation of the dysfunctional temporal bone
 - c. Venous sinus drainage
 - d. All of the above
4. Permanent neurologic sequelae is common in Ramsay Hunt syndrome.
 - a. True
 - b. False

The Effect of the Student American Academy of Osteopathy Summer Preceptorship Program on Students' Perception of Osteopathic Manipulative Treatment

Kathleen M. Vazzana, OMS IV; Vivian Chan, OMS II; Charles H. Wenzel, JD, OMS IV; and Sheldon C. Yao, DO

Abstract

Context: To maintain the identity of the osteopathic community, it is crucial to have programs that encourage osteopathic medical students to utilize OMT. The Student American Academy of Osteopathy (SAAO) Summer Preceptorship Program is a unique program that focuses on giving clinical OMT exposure to second-year students.

Objective: To determine if participation in the SAAO Summer Preceptorship Program affected students' perceptions of OMT and likelihood of integration of OMT into students' future medical practice.

Design: Survey

Setting: New York Institute of Technology College of Osteopathic Medicine (NYIT-COM)

Participants: Second-year osteopathic medical students

Main Outcome Measure: We measured the interpretations of OMT using Likert scales reported by the participants.

Method: Fifty participants were administered a paper survey containing 12 multiple-choice and five open-ended questions regarding their perceptions of OMT and experiences with the program.

Results: Thirty students completed the survey. Twenty-nine students had an improved confidence level and understanding of the clinical application with using OMT; one was undecided. Twenty-nine students were more likely to integrate OMT into their future practice; one was undecided. Twenty-seven students had an expanded awareness of what conditions can be treated with OMT; three were undecided. Twenty-nine students had an overall positive perception of OMT; one was undecided.

Conclusions: The SAAO Summer Preceptorship Program had a positive effect on students' perception of OMT and likelihood of integration of OMT into their

future medical practice. Follow-up study is warranted to determine actual effects on future utilization of OMT in clinical practice.

IRB: Approved by NYIT IRB. IRB # BHS970. (8/20/2013)

Introduction

In medical education, the current literature has determined the positive influence of clinical experience and role models on medical students' attitudes toward health professions and certain career specialties.¹⁻⁵ At the Mayo Medical School, exposure to an optional week-long pediatrics experience led to an increase in interest and knowledge in the field of pediatrics among its first- and second-year medical students. Greater than 25 percent of the school's first- and second-year medical students participated in this selective experience, consisting of workshops and faculty and resident panel discussions.⁶ Other studies have similarly demonstrated that exposing students to particular specialties in their pre-clinical years increases their predilection towards choosing that specialty.^{7,8}

Practicing osteopathic manipulative treatment (OMT) is part of the unique identity of doctors of osteopathic medicine. However, it has been utilized less frequently by recent osteopathic medical graduates.^{9,10} Chamberlain and Yates found that prior to entering rotations, over 70 percent of second-year osteopathic medical students decided that they would not utilize OMT. Within the same student population upon graduation, the percentage of students that were disinclined toward OMT use rose to 90 percent.¹¹

To maintain the identity of the osteopathic community, it is crucial to have programs that encourage osteopathic medical students to utilize OMT. Teng, AK, et al. found that the addition of a mandatory third-year and fourth-year clinical osteopathic manipulative treatment (OMT) exposure led to an improvement in the students' reported comfort level with OMT; however, students' overall attitude toward

OMT use was not examined.¹² The effect of providing OMT clinical experiences during the pre-clinical medical education years merits further study.

The Student American Academy of Osteopathy (SAAO) Summer Preceptorship Program is a unique program offered by NYIT College of Osteopathic Medicine (NYIT-COM). This program provides OMT workshops and clinical sessions to incoming second-year students. This study assesses the effectiveness of the 2013 SAAO Summer Preceptorship Program on influencing students' attitudes and prospective use of OMT.

Description of SAAO Summer Preceptorship Program

This year's SAAO Summer Preceptorship Program ran from June 10 to July 26, 2013. Fifty-two rising second-year medical students participated in the program; 50 students completed the program. To complete the program, students were required to attend at least 10 out of 14 workshops and complete two shadowing sessions of osteopathic physicians at the Academic Health Care Center at NYIT-COM. The 14 workshops included topics ranging from case-based presentations utilizing OMT to alternative medicines. Most workshops ran for one hour, were taught by osteopathic physicians, and included time for students to practice demonstrated techniques on one another.

Table 1. 2013 SAAO Summer Preceptorship Program Workshops. *Unless otherwise specified, workshops were taught by osteopathic physicians and professors at NYIT-COM and ran for one hour.* New York Institute of Technology College of Osteopathic Medicine. Old Westbury, NY. 2013.

Date	Workshop Description	Date	Workshop Description
June 10	Introduction to the Program and Balanced Ligamentous Tension (BLT) workshop. <i>Students were oriented to professionalism, HIPAA, and observation of OMT in the health center. Students then practiced BLT for the transverse carpal ligament, interosseous membrane, and rib cage after discussion of clinical cases in which they would be used (i.e., carpal tunnel syndrome and asthma).</i>	July 10	OMT in Rotations and Preparing for Boards: <i>Academic scholars at NYIT-COM led small group sessions, sharing their experience with utilizing OMM and OMT in rotations, preparing for boards, and briefly presented on board topics, such as Chapman's reflex points.</i>
June 11	Osteopathic Clinical Considerations in Treating Irritated Bowel Syndrome (IBS): <i>Presentation on the nervous system's role in IBS. Students practiced the following techniques: indirect myofascial on the thoracolumbar, sacroiliac articulation technique and sacral rocking, abdominal mesenteric lift, and suboccipital release.</i>	July 17, 3 hrs	Biodynamic Cranial Osteopathy: <i>Biodynamic concepts were introduced. Students experienced a palpation workshop sensing their partner's health through cranial, chest and lower extremity palpations.</i>
June 12	Alternative Approaches to Patient Education: <i>Articles on alternative treatments were provided and discussed. Students practiced the Jacobson's Muscle Relaxation Technique.</i>	July 19, 2 hrs	Occipital-Atlanto Joint and Biodynamics: <i>A presentation on biodynamic concepts reviewed cranial dysfunctions and how to treat an anterior and posterior atlas. Students were also guided through palpation exercises.</i>
June 18	The Still Technique: <i>The Still Techniques for the first rib, cervical spine, and thoracic spine were demonstrated and practiced. Clinical correlations for treatment of these areas were discussed.</i>	July 23	Using Your Osteopathic Hands and Mind: <i>This was a discussion on the principles of osteopathic and alternative medicines, including traditional Chinese Medicine.</i>
June 24	Acupuncture: <i>The origins and principles of acupuncture were presented. After the physician spoke about his own training and patients' successes, he guided the students in how to use an acupuncture needle to alleviate their partners' tense muscle.</i>	July 23	Using and Explaining OMT in Clinical Situations; OMT in Research: <i>Advice and insight to common patient encounters and osteopathic research were discussed. Research concepts and advances in the field of OMM were discussed.</i>
June 25	Pain from Studying and the Effects of Stress on Visceral Organs: <i>With guidance, students practiced the following stress-relieving techniques: condylar decompression, FPR on the trapezius and the first rib, thoracic outlet release.</i>	July 26	Outdoor Therapeutic Yoga Integrating Osteopathic Philosophy: <i>An academic scholar led an outdoors yoga session integrating osteopathic philosophy and concepts.</i>
July 9	Tai Chi: <i>A Tai Chi instructor for NYIT's Parkinson's program led an outdoor Tai Chi session.</i>	July 27	OMT in Pediatrics; Program Closing Notes: <i>Faculty demonstrated and discussed OMT use on children with two volunteer children from the faculty. The workshop covered key considerations in treating the pediatric population.</i>

Table 1 shows the dates, duration, and topic of each workshop.

Methods

This study was approved by the NYIT Institutional Review Board as an exempt study (NYIT-IRB BHS#970). Following completion of the SAAO OMT Summer Preceptorship Program, students were provided with a brief, hard copy 12-question survey (see Appendix A, page 20). The study was conducted at NYIT-COM in Old Westbury, NY. Responders were not provided with any incentives to complete the survey.

The survey contained five multiple-choice questions regarding the impact of the preceptorship on the students' perceptions of OMT. The survey employed the statistically validated Likert scale format for five of the seven scaled questions. The five-point Likert scale answer selections ranged from "strongly agree" to "strongly disagree."¹³ These first five questions assessed the effect of the program on the participants' perception of OMT confidence level, understanding of clinical applications of OMT, awareness of the scope, anticipated future use of OMT and their overall perception of OMT. The outcomes measured were the interpretations of the perception Likert scales reported by the participants.

Responders' confidence level was assessed by the statement, "I believe this program helped me to improve my confidence level with using OMT." Their understanding was assessed by the statement, "I believe this program helped me understand the

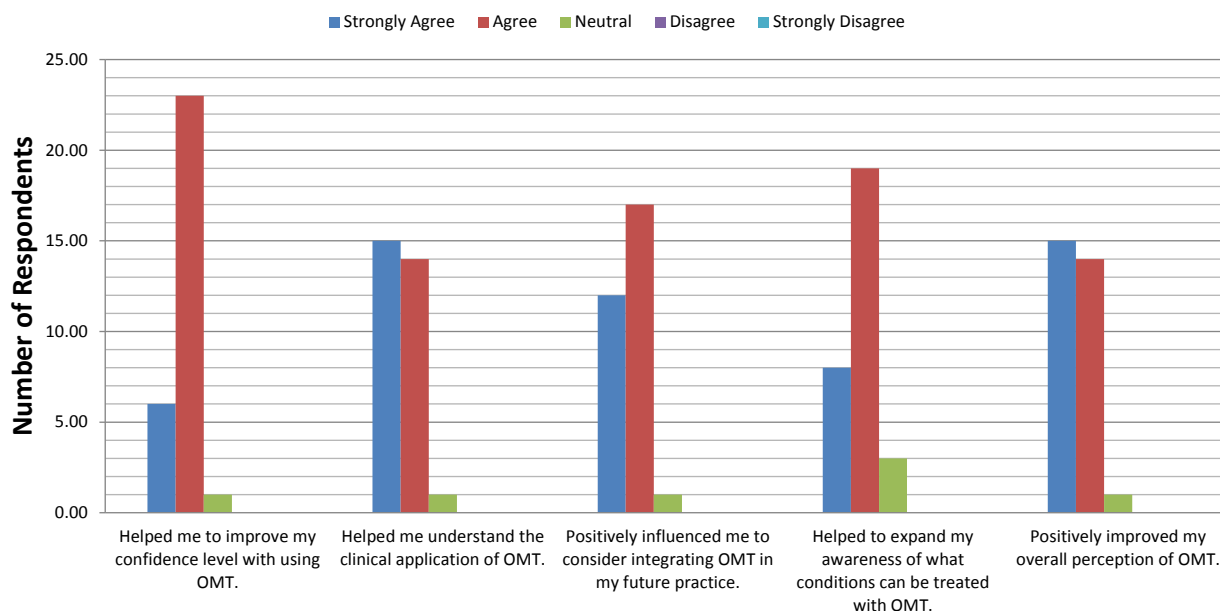
clinical application of OMT." Participants' intention to use OMT in the future was assessed by the statement, "I believe this program positively influenced me to consider integrating of OMT in my future practice." Their awareness of the scope of OMT was assessed by the statement, "I believe this program helped to expand my awareness of what conditions can be treated with OMT." Finally, participants rated the effect of the program on their overall perception of OMT via the following statement: "I believe that this program positively improved my overall perception of OMT."

To evaluate respectively the clinic and workshop portions of the program, participants were asked two-part questions. The first part of questions six and seven respectively asked how many sessions of each did the student attend. We utilized a modified Likert-type level of quality scale for the second part of questions six and seven.¹⁴ The answer options for this scale were: (1) Very Poor, (2) Poor, (3) Neutral, (4) Good, (5) Excellent.

The last five questions of the survey were open and free-form in nature to allow for feedback regarding the least/most beneficial aspects of the program, recommended improvements, and what the student would do differently after participating in the program.

Data analysis was performed using IBM® SPSS® statistical software version 21. The response rate was calculated. Frequencies and percentages were calculated for each of the scaled responses: both the Likert scale questions and the modified Likert-type level of quality questions.

Figure 1. Likert Scaled Responses to OMT Perception Questions. N=30. New York Institute of Technology College of Osteopathic Medicine. Old Westbury, NY. 2013.



Self-Reported Effect of Preceptorship on Respondents

continued from page 12

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Results

Of the 50 second-year medical students who completed the SAAO Preceptorship Program, 30 students completed the survey. The overall response rate was 60 percent. Participants responded to five questions regarding the effect of the program on their perception of OMT on the validated Likert scale. When assessing confidence level, 20 percent (n=6) responded "strongly agree," 76.67 percent (n=23) responded "agree," and 3.33 percent (n=1) responded "undecided."

The assessment of participants' understanding of clinical application found that 50 percent (n=15) responded "strongly agree," 46.67 percent (n=14) responded "agree," and 3.33 percent (n=1) responded "undecided" to the Likert scale statement. This was a 96.67 percent positive response of either "strongly agree" or "agree."

When assessing the intention of future clinical use, 40 percent of participants (n=12) responded "strongly agree," 56.67 percent (n=17) responded "agree," and 3.33 percent (n=1) responded "undecided." This was a 96.67 percent positive response rate. Assessment

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of participants' awareness of the scope of OMT was assessed and 26.67 percent of participants (n=8) responded "strongly agree," 63.33 percent (n=19) responded "agree," and 10 percent (n=3) responded "undecided." This was a 90 percent positive response rate for scope.

Assessment of the overall effect of the SAAO program on participants' perception of OMT found that 50 percent (n=15) responded "strongly agree," 46.67 percent (n=14) responded "agree," and 3.33 percent (n=1) responded "undecided" to the statement. This was a 96.67 percent positive response rate for the effect of the program on participants' overall OMT perception. No participants responded "disagree" or "strongly disagree" to any of the survey questions. (Figure 1)

Of the 30 completed surveys, participants attended an average of 2.21 clinic shadowing sessions. Fifty percent (n=15) of participants scored the quality of these sessions as "excellent" on the quality scale; 46.67 percent (n=14) scored the quality as "good," and 3.33 percent (n=1) scored the quality as "neutral."

Participants attended an average of 10.29 workshop sessions. Twenty percent (n=6) of participants rated the quality of the workshop sessions as "excellent;" 73.33 percent (n=22) rated them as "good;" 3.33 percent (n=1) rated the workshops as "neutral."

Comment

The SAAO Summer Preceptorship Program combines clinical shadowing experiences and OMT workshops, exposing students to a variety of osteopathic physicians, providing mentors in the field, and highlighting the many clinical applications of OMT.

The results illustrate the positive effects of the SAAO Summer Preceptorship program on second-year medical students' perceptions of and intentions to use OMT. Respondents reported an overall positive effect on their perception of OMT, which comprised their OMT confidence level, understanding of clinical applications of OMT, awareness of the scope of OMT, and anticipated future use of OMT in clinical practice.

A comprehensive medical education provides students with clinical experiences and mentors. Our results coincide with current health care educational research. Nieman et al. observed that participation in the Texas Statewide Family Practice Preceptorship Program (TSFPPP) was associated with an increased

selection of family practice residency. The TSFPPP included direct and observed interactions with patients in inpatient and outpatient family practice settings. In contrast to non-participants, significance was found in students who participated in the first and second year (OR=1.62, 95% CI: 1.41-1.87); third and fourth year (OR=2.31, 95% CI=1.99-2.68); and throughout their four years of medical school (OR=4.98, 95% CI: 3.75-6.68).¹⁵ Likewise, researchers at Stanford University Medical Center conducted a study examining the effects of an 8-week vascular surgery simulation elective course on 52 preclinical medical students. Prior to the elective, nine percent of students were highly interested in vascular surgery as a specialty. Post-course, 90 percent (p=.03) of the participants were interested in pursuing vascular surgery, and long-term follow up (one to three years) revealed that 70 percent remained interested. Most respondents attributed their continued interest in the specialty to the simulation practice course (90 percent) and faculty mentorship (70 percent).¹⁶

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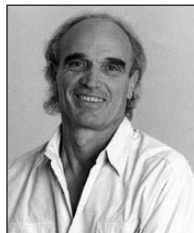
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Jean-Pierre Barral, DO, Featured Speaker

Jean-Pierre is an Osteopath and Registered Physical Therapist who serves as Director (and Faculty) of the Department of Osteopathic Manipulation at the University of Paris School of Medicine in Paris, France. He earned his diploma in Osteopathic Medicine in 1974 from the European School of Osteopathy in Maidstone, England, and went on to teach spinal biomechanics at the institution from 1975-1982.

He developed the modality of Visceral Manipulation based on his innovative theory that each internal organ rotates on a physiological



axis. In collaboration with Alain Croibier, DO, Jean-Pierre Barral has also developed the modalities of Neural Manipulation and Global Joint Treatment based on their on-going clinical research.

Dr. Barral holds the title of Curriculum Developer for the Barral Institute. Dr. Barral took the modalities and developed them into various manual therapy courses, which he taught since 1985. Dr. Barral has trained and certified a team of International Teachers who also instruct these courses around the world.

Since 1999 he has maintained a private practice in Grenoble, France, and has served as Chairman of Department of Visceral Manipulation on the Faculty of Medicine Osteopathy, Grenoble, France; the Chairman of Department of Visceral Manipulation on Faculty of Medicine Paris du Nord; and Academic Director of International College of Osteopathy, St. Etienne, France.

Kenneth J. Lossing, DO, Program Chair

Dr. Lossing is a 1994 graduate of Kirksville College of Osteopathic Medicine. He completed internship and residency programs at Ohio University College of Osteopathic Medicine, and is certified in Neuromusculoskeletal Medicine/ Osteopathic Manipulative Medicine and Family Practice. Dr. Lossing studied under French osteopath Jean-Pierre Barral, DO, and is known internationally as a lecturer on visceral manipulation. He is the AAO President-elect and a member of the AAO Board of Trustees.



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Future Studies

The long-term effects of this program can be assessed in future studies. This can be accomplished by surveying past participants of the program on their use of OMT during third- and fourth-year clinical rotations and in clinical practice after graduation. This study could also be used to guide a larger study examining the effect of this type of program on OMT use and perception.

Limitations

The limitations of our study deserve consideration and should be addressed in future surveys on this topic. Our sample size of 30 participants was small. There is a selection bias innately present in this study—students self-selected to participate in the SAAO Summer Preceptorship Program. Study participants from that self-selected group then voluntarily answered this survey. Participants may not be truly representative of the larger population of preclinical osteopathic students. Baseline assessment of participants' OMT perceptions prior to the start of the program was not obtained.

Conclusion

The 2013 SAAO Summer Preceptorship Program's effect has been evaluated by 60 percent of its participants (n=30) as positively affecting their perception of OMT. This positive evaluation supports the continuation and further study of this program. To the best of our knowledge, the implementation of OMT clinical experiences in the pre-clinical medical education years has seldom been assessed. The effects of a structured pre-clinical experience on students' attitudes, knowledge and potential behavior in regards to OMT use and application—and the potential benefits it can have on the continued usage of OMT in the osteopathic profession as a whole—merits further attention and research.

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APPENDIX A

SAAO Summer OMM Preceptorship Survey 2013

Please circle/underline or complete the following questions:

1. I believe this program helped me to improve my confidence level with using OMT.
Strongly Agree / Agree / Undecided
/ Disagree / Strongly Disagree
2. I believe this program helped me understand the clinical application of OMT.
Strongly Agree / Agree / Undecided
/ Disagree / Strongly Disagree
3. I believe this program positively influenced me to consider integrating of OMT in my future practice.
Strongly Agree / Agree / Undecided
/ Disagree / Strongly Disagree
4. I believe this program helped to expand my awareness of what conditions can be treated with OMT.
Strongly Agree / Agree / Undecided
/ Disagree / Strongly Disagree
5. I believe that this program positively improved my overall perception of OMT.
Strongly Agree / Agree / Undecided
/ Disagree / Strongly Disagree
- 6.a. How many sessions did you shadow a clinician in this program? _____
b. How would you rate the overall educational quality of the shadowing session?
Very Poor / Poor / Neutral / Good / Excellent
- 7.a. How many workshop sessions did you attend in this program? _____
b. How would you rate the overall educational quality of the workshops?
Very Poor / Poor / Neutral / Good / Excellent
8. What aspects of the program were most beneficial?
9. What aspects of the program did you find least valuable?
10. What improvements would you recommend?
11. Give an example of one thing you will do differently because of this program.
12. Please feel free to share any additional comments and suggestions. And use the back of the page to continue if necessary.
(Your answers will be kept confidential. Thank you for your assistance to continue to improve the program!)

The Application of the Cranial Concept in the Investigation of Baffling Medical Disorders and Their Treatment: A Synergopathic Medical Disease Model

Krishnahari S. Pribadi, MD

Abstract

Despite current progress in medical research of diseases, there are still many diseases that are considered to be enigmatic and baffling in nature. To investigate the etiologies and the nature of many baffling disorders, medical researchers design trials to explore the pathways that lead to illness and to search for new ways to treat human disease. The range of available models is extensive, ranging from computer models to single cells and simple organisms, such as worms, to higher vertebrate species. However, extrapolation into human subjects remains problematic. Ideally, the best disease model is the human disease model, therefore obviating the need to extrapolate the results of research based on non-

human models. However, many investigative methods are intrusive and may introduce unpredictable changes and responses of the body mechanisms. The human organism is very complex and may not be represented by inanimate or animal models lacking in mental and spiritual dimension.

By using a non-invasive cranial palpation method to determine the bioenergetic, spiritual, craniosacral, physical medical, meridian, acupuncture, endocrine, nutritional, food intolerance, leaky gut, circulation, specific pathological profiles of an individual, the author suggests the technical procedures to evaluate the clinical comprehensive and holistic picture of an individual affected by a specific disease process. Based on these findings, we can develop the hypotheses of

specific diseases which affect the individuals. The hypotheses can then be tested in design trials using various models as appropriate. Various treatment approaches can be developed and tested out. The Synergopathic Disease Model Assessment Form has been devised by the author and can be obtained for free for clinical and research purposes by email.

Introduction

Despite current progress in medical research of diseases, there are still many diseases that are considered enigmatic and baffling in nature. Koch's postulates, developed in the 19th century, have played an important role in microbiology¹ as general guidelines to identify etiologies of infectious diseases. They have been successful in clarifying the nature of many infectious disease processes such as cholera, small pox, tuberculosis, poliomyelitis and many other viral infections. Recently, modern nucleic acid-based microbial detection methods have made Koch's original postulates less relevant. These nucleic acid-based methods make it possible to identify microbes that are associated with a disease.² Yet there are still many baffling diseases, including many autoimmune disorders, degenerative diseases, fibromyalgia, chronic fatigue syndrome, schizophrenia, autism, diabetes mellitus type 1 and 2, Alzheimers's disease, Parkinson's disease, Guillain-Barre syndrome, leaky gut syndrome, polyneuropathy, allergic diseases, various cancers and many others. To investigate the etiologies and the nature of these baffling disorders, medical researchers design trials to explore the pathways that lead to illness and to search for new ways to treat human disease. These scientists use disease models in their research, especially to test specific hypotheses or to explore unintended reactions. Animal models play an integral part in translational research. The range of available models is extensive, ranging from computer models to single cells and simple organisms such as worms, to higher vertebrate species. However, extrapolation into human subjects remains problematic.³ Thus, the treatment of baffling disorders remains hampered by the lack of understanding of the disease processes and the limitations of conventional medicine, which relies heavily on chemical pharmacological interventions, developed primarily based on animal models and in vitro testing. Ideally, the best disease model is the human disease model, therefore obviating the need to extrapolate the results of research based on non-human models. However, many investigative methods are intrusive and may introduce unpredictable changes and responses of the body mechanisms. The human organism is very complex and may not be represented

by inanimate or animal models lacking in mental and spiritual dimension. Furthermore, the power of conventional bedside physical examination is limited. Psychiatric disorders were considered to have no physical abnormalities before the work of Woods & Woods. Their research demonstrated the presence of abnormal cranial mechanism in schizophrenic patients characterized by membranous restriction, osteomastoid sutural restriction, sphenobasilar compression and slow and weak cranial impulse rhythm.⁴

Synergopathic Disease Model

What is Synergopathic medicine? The author coined the term to describe a system of medicine capable of integrating various philosophical forms of medicine within a single framework based on synergetic philosophical ideas and concepts as promulgated by R. Buckminster Fuller. Synergy is a state of optimal functioning of an integrated system consisting of parts and components. "Synergy means behavior of integral, aggregate, whole systems unpredicted by behaviors of any of their components or subassemblies of their components taken separately from the whole."^{5,6} *Disease is caused by a dis-synergic state of the systems and subsystems within an organism, caused by either internal or external factors or both.* Synergopathic medicine synthesizes and integrates all current forms of medicine—including, but not limited to, allopathic medicine, osteopathic medicine, cranial osteopathy, homeopathy, natural medicine, chiropractic medicine, acupuncture, herbalism, traditional medicine, bioenergetic medicine, spiritual medicine, etc.—within a single framework capable of dissolving all differences and contradictions, thereby synthesizing and integrating all the components and subassemblies of their components to form a synergic state.

Cranial Osteopathy is considered to be the core of Synergopathic medicine and is used to integrate all elements of various medicines since all forms of medicine affect the craniosacral system functioning as the highest regulatory system in the body. By evaluating, monitoring and manipulating therapeutically the craniosacral system, we synergetically apply any medical procedures capable of optimizing this system. We no longer divide a patient into parts and components to be treated with various forms of medicine. Thus, we no longer treat unilaterally—organs with various pharmacological moieties and/or surgeries; the mind with manipulation of thinking; emotional patterns with various psychotherapeutic modalities and interventions; and the spirit with practices of various beliefs and myths. Instead, we see a patient as a living human being consisting of systems organized

and integrated biologically, socially, mentally, cosmologically and spiritually to form a thinking, acting, willing being that has feelings, meaning and hope as well as physical components and spiritual existence. Instead of forcing a patient into one form of medicine, we bring all forms of medicine to the patient to be applied systematically and holistically.⁶

The Craniosacral Digital Diagnostic Method

The author's research, using a surface scanning laser displacement meter to record micro-pulsations, has objectively established the presence of pulsations (with a maximum deflection of 0.07 mm and frequencies ranging from 4 to 11 cpm) at several acupuncture points, the characteristics of which are identified with the characteristics of the cranial rhythmic impulse.⁷ The cranial rhythmic impulse (CRI) reflects the homeostatic status of a person. Abnormal CRI usually indicates there are problems within the homeostatic mechanisms of a person. There are agents and forces that can influence the CRI characteristics. *The use of non-invasive and safe palpation, with "feeling, thinking, seeing and knowing fingers" is the cornerstone of the cranial diagnostic method as developed by William G. Sutherland, DO.* Monitoring the CRI while applying the cranial manipulative procedures is an important aspect of the palpation of the CRI. Based on these findings, the author developed the *Craniosacral Digital Diagnostic*

Method to assess the characteristics of pulsations of specific acupuncture points to determine the meridian profile of an individual. By palpating the MUE 49 of the hand fingers and two additional acupuncture points at the dorsal surface of the middle knuckles, the treatment specialist establishes the characteristics of the 12 meridians of an individual. The following methods developed by the author combine to create an individual's acupuncture profile:

- Craniosacral Acupuncture Palpatory Method© is used to locate abnormal acupuncture points.
- Craniosacral Nutritional Assessment Method© determines nutritional requirements by palpating the nutritional points for CRI.
- Craniosacral Allergy Screening Test© can screen foods, substances and/or drugs for allergy or intolerance.
- Craniosacral Therapeutic Sensitivity and Dose Determination© determines individual therapeutic sensitivity to therapeutic agents and their doses.
- Craniosacral Tele-Diagnostic Method© can be used to diagnose, as well as treat, patients from great distances.
- Craniosacral Pathological Profile Method is a method to determine the nature of the pathological processes of an individual

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Practice available in Hartford, CT. Primarily specializes in OMT, prolotherapy and chronic pain management. Income for 2012 was \$700K, with net income of \$335K. Much more to explain regarding demographics of the community, hospitals in the area and beautiful nearby residential areas. If interested, please contact Gary N. Wiessen at (631) 281-2810 or gnw1@buysellpractices.com.

(circulation, immunity, toxin, hormone, neoplastic, degeneration, nutritional, tissue oxygenation, spiritual).

The author also devised a method to determine the specific blood biochemical values of an individual by palpating specific points. Abnormal points are associated with the absence of PRM pulsations of the specific points (Upledger-Pribadi's sign). There are three levels of pressures used: light (0 g), medium (5 g) and hard (20 g), representing successively the bioenergetic, chemical and physical dimensions of the disease processes being evaluated.⁸ *By determining the bioenergetic, spiritual, craniosacral, physical medical, meridian, acupuncture, endocrine, nutritional, food intolerance, leaky gut, circulation, specific pathological profiles of an individual, we can thus develop the clinical comprehensive and holistic picture of an individual affected by a specific disease process. Based on the findings, thus, we can develop the hypotheses of specific diseases which affect the individuals. The hypotheses can then be tested out in design trials using various models as appropriate. Various treatment approaches can then be developed and tested out. The Synergopathic Disease Model Assessment Form has been devised by the author.*

Synergopathic Herbal Formulas

The author introduced the cranial osteopathic, homeopathic and acupuncture medicine concepts along with the phyto-pharmacological concept in formulating herbal formulas in addition to utilizing traditional discoveries as well as vast literatures in the use of Indonesian herbal plants for medicinal purposes. Each herbal plant has a specific meridian spectral response when ingested. The use of a laser scanning meter to detect and measure pulsation at acupuncture points has the potential to objectively evaluate the meridian spectrum of each herbal plant. The author uses a clinical palpation method of the acupuncture points to evaluate the herbal meridian spectrum. Fortunately, due to the bio-energetic properties of herbal plants, by simply touching the body with a certain herbal plant, we can evaluate and measure the specific effects of that particular herbal plant upon the craniosacral, meridian, acupuncture and bioenergy system of an individual affected by specific diseases; thus each formula has therapeutic effects upon the physiological and regulatory mechanisms at the chemical level (phyto-pharmacological effect), the meridian system (meridian effect), the craniosacral system as the highest regulatory system within the body (craniosacral effect), the vital energy system (homeopathic effect) and the primitive brain system (olfactory or aromatherapeutic effect). This modern

and revolutionized approach to preparing herbal plants as remedies has proven to be very economical, effective, safe and powerful.⁹

Leaky Gut Syndrome

Leaky gut syndrome, or increased intestinal permeability,¹⁰ is caused by increased permeability of the gut wall resulting from toxins, poor diet, parasites, infection or medications.¹¹ This permeability then allows substances such as toxins, microbes, undigested food, waste or macromolecules to enter the circulation. Intestinal inflammation caused by intestinal dysbiosis or other sources of irritation, widens the junctions between the cells of the intestinal lining, allowing endotoxins and incompletely digested particles to be partially absorbed. These are targeted by antibodies, forming immune complexes which cause a semi-infectious state, and can be carried by the bloodstream to distant sites where they may stimulate the release of cytokines.¹² Although leaky gut syndrome is not an established diagnosis, there are clinical diagnostic tests that actually measure permeability of the gut wall. Cranial palpation method can be used to detect leaky gut syndrome. Place two hands simultaneously on liver-epigastrium, liver-navel and liver-colon areas. The absence of PRM pulsations indicates the presence of leaky gut syndrome. Probes of Cr EDTA, PEG 400, lactulose, mannitol and rhamnase, have been used to measure intestinal permeability by looking at urinary recovery.¹³ Another test used by researchers quantitatively assesses the translocation of lipopolysaccharide (LPS) molecules across the gut wall.¹⁴ Low grade fever, transient gut pain, and a sense of inability to absorb nutrients are some reported symptoms in otherwise undiagnosed patients.¹⁵ Leaky gut syndrome is associated with many disorders such as asthma, diabetes, autoimmune diseases like lupus, diseases like scleroderma, internal colitis, long-term disorders like rheumatoid arthritis, severe illnesses like multiple sclerosis and chronic fatigue syndrome and Crohn's disease. Several dietary treatments, including gluten-free diets, casein-free diets, antifungal diets, low-sugar diets, as well as supplements that include nystatin, B12 and probiotics have been introduced.¹⁶

Case Investigation

See the accompanying table on page 25.

Conclusion and Proposed Research Issues

The case investigation using the Synergopathic disease model has identified common issues in the pathways of various baffling disorders. Central in the development of diseases is the role of viral infection, which triggers autoimmune reactions against most cells

in the body. Therefore, identifying viruses responsible for initiating the disease process is crucial. The PCR method is relevant. Immune system abnormality is particularly present. The study of immunology components, cellular and humoral factors, is essential. The presence of negative energy field and weak bioenergy system suggests the role of spiritual forces. These can be studied by using Kirlian photography, surface scanning laser displacement meter to measure acupuncture pulsations, acupuncture electronic measurement device, magnetic sensor device, etc. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes should be studied using objective measurement methods. Laboratory biochemical assays to determine abnormal metabolism and assessment of vitamins, minerals and enzyme deficiencies should be conducted. Specific biological markers should be identified and laboratory procedures devised to assist in the diagnosis. Leaky gut syndrome should be diagnosed by laboratory methods, candida microbiology and digestive stool examination. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs should be identified and measured. Research of various treatment methods addressing all the abnormal mechanisms to establish a new balance and homeostatic regulation pattern, cellular, tissue and organ repair and regeneration and nutritional deficiencies should be devised and studied. Treatment procedures that affect the craniosacral system negatively are not considered effective. Effective treatment procedures must correct specific abnormalities of the diseases. Synergopathic herbal formulas for specific diseases have been designed to support and correct the abnormal disease processes and will produce more or less normal Synergopathic disease model profiles. *By simply placing the specific formulas on the body, all the profiles as tested by the cranial palpation method will revert to normal.* It is unlikely that only pharmacological intervention is effective. Patients with these diseases may develop immunological reactions to synthetic drugs and serious side effects.

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continued on page 33

Table 1. Case Investigations

AUTISM	Case	Following an MRI vaccination, a 4-year-old boy suddenly ceased his language development at the age of 15 months, accompanied by typical autistic behavior: poor eye contact, social avoidance, flapping, toe-walking, ritual compulsive behavior. Biomedical interventions did not result in significant improvement. History includes febrile convulsion and cesarean delivery. No medical complications during the first two years of life except for febrile convulsion.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD Autism. All CDs of pathologic processes reveal abnormalities indicating that the disease involved all aspects of human physiology. However, there is no organ failure. Automunne reactions are present in most organs, notably brain, nerves, thyroid, intrinsic factor, gastrointestines most likely triggered by measles virus from vaccination as he does not have a history of childhood measles. Measles virus is present in the genetic DNA and stem cells. Influenza virus is present in the nervous system, respiratory, GI tract, immune system, musculoskeletal system, genitourinary system, etc. Mumps virus is present in the parotid glands and testis. Leaky gut syndrome is present, most likely caused by intestinal candida infection and heavy metals pollution. Immune system is inefficient with autoimmune components. All hormones are affected, notably testosterone, steroid, pineal, thyroid, growth hormones. Neurotransmitters are abnormal with high dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12 due to poor digestion and absorption. Notably, digestive enzymes and bile salts are poorly produced. Nutritional deficiencies include vitamins A, B complex, B12, C, E, bioflavonoid, chlorophyll, iodine, intrinsic factor, calcium, magnesium, zinc. Heavy metal poisoning is present notably: aluminum, cadmium, mercury, arsenicum, lead. Toxins are present. Most major acupuncture points are abnormal, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The house is filled with negative energy field. The craniosacral system is locked up and not operating due to stress patterns and weak energy system. Food intolerance includes; gluten, casein, frying vegetable oils, eggs, honey, sugar, tempeh, hot pepper, pepper, phenol-containing fruits, seafood, meat, chicken, fish, chocolate, coffee, additives, beans, nuts with the exception of soy beans.
	Hypothesis	Central in the development of autism is the role of viral infection, which triggers neurodegeneration and autoimmune reactions, particularly toward the brain and nerve cellular components, intrinsic factor and tissue which cause abnormal neurotransmitter production and regulation. Immune system abnormality is particularly present. Abnormal craniosacral mechanism caused by prenatal, natal or natal trauma, is present. Thick dural membranes, SBS compression, medial compression as well as bilateral osteomastoid restrictions and lumbosacral compression are detected. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. Leaky gut syndrome, caused by intestinal candida infection, sensitizes the immune system toward allergens and body components. Spiritual forces play into the development of autism and therefore should be considered in treating this disorder. Nutritional approach is essential along with herbal and supplement treatment. Treatment should be holistic in nature, addressing all the abnormal mechanisms and nutritional deficiencies and establishing a new balance and homeostatic regulation pattern. Left and right brain integration, audiovisual integration, cerebral brain stem integration are lacking. Autism is a neurodevelopmental disorder caused by multiple factors involving body, mind and spiritual dimensions, including gene mutations, heredity, viral infection, autoimmune response to virus, leaky gut syndrome, neurotransmitter imbalance, nutritional deficiencies due to poor digestion and assimilation of nutrition. Negative energy interferes with the bioenergetic regulatory system at the craniosacral, meridian-acupuncture and chakra system.
	Current Concepts & Medical Research Findings	Autism is a disorder of neural development characterized by impaired social interaction and communication and by restricted and repetitive behavior. The genetics of autism are complex. Relations have been found between autism and schizophrenia based on duplications and deletions of chromosomes. Evidence points to synaptic dysfunction as a cause of autism. ¹⁷ Environmental factors that have been claimed to contribute to, or exacerbate, autism, or may be important in future research, include certain foods, infectious disease, heavy metals, solvents, diesel exhaust, PCBs, phthalates and phenols used in plastic products, pesticides, brominated flame retardants, alcohol, smoking, illicit drugs, vaccines ⁸ and prenatal stress. ⁶⁹ The relationship of neurochemicals to autism is not well understood; several have been investigated, with the most evidence for the role of serotonin and of genetic differences in its transport. ³ Aberrant immune activity during critical periods of neurodevelopment is possible.
	Synergopathic Herbal Formula	Extracts of abri precatorius, centellae asiatica, curcuma officinalis, morinda citrifolia, panax ginseng, phyllanthus urinaria, stachytarpheta mutabilis, sonchi arvensis, zingiberis officinalis, aloe vera, avocado, cantaloupe, pineapple, guava, passiflora fruits, probiotic, lactobacillus acidophilus in sorbitol and natural alcohol 20%.
SCHIZOPHRENIA	Case	A 38-year-old man diagnosed with schizoaffective disorder, a history of drug abuse (marijuana, amphetamine, LSD, cocaine but not heroine) and alcohol abuse starting at age 16 following parental separation. He has been on antipsychotic drugs and valproic acid for a number of years. He has engaged in aggressive behavior toward family members, criminal behaviors including theft and robbery, resulting in imprisonment. Symptoms include mood swings, auditory hallucinations, persecutory and grandiose delusions and negative symptoms.

SCHIZOPHRENIA (cont'd.)	Findings	<p>This individual shows positive Upledger-Pribadi's sign at the CD SCHIZ. All CDs of pathologic processes reveal abnormalities indicating that the disease involved all aspects of human physiology. However, there is no organ failure. Autoimmune reactions are present in most organs, notably brain, nerves, thyroid, most likely triggered by measles virus from vaccine as he does not have a history of childhood measles leading toward neurodegeneration. Measles virus as well as the genetic DNA and stem cells. Influenza virus is present in the nervous system, respiratory, GI tract, immune system, musculoskeletal system, genitourinary system, etc. Mumps virus is present in the parotid glands and testis. Leaky gut syndromes is present, most likely caused by intestinal candida infection and heavy metals pollution. Immune system is inefficient with autoimmune components. All hormones are affected, notably testosterone, steroid, pineal, thyroid. Neurotransmitters are abnormal with high dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12 due to poor digestion and absorption. Notably, digestive enzymes, and bile salts are poorly produced. High uric acid, cholesterol, triglyceride suggest abnormal metabolism. Intrinsic factor is lacking. Most major acupuncture points are abnormal, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns and weak energy system. This young man experimented with addictive drugs at the age of 16 following parental separation. These addictive drugs introduced him to the world of negative energy; consequently, he has been easily influenced by negative spiritual forces, with poor impulse control and lack of conscience. He has engaged in many antisocial behaviors, including aggressive behavior, robbery and theft, and has been imprisoned on several occasions. He was unable to pursue his graduate education as his intellectual functioning deteriorated quickly and he was unable to control his behavior and motivation. He shows periodic psychotic decompensation with extreme mood swings. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation.</p>
	Hypothesis	<p>Central in the development of schizophrenic illness is the role of viral infection, which triggers neurodegeneration and autoimmune reactions particularly toward the brain and nerve cellular components and/or tissue, which cause abnormal neurotransmitter production and regulation. Immune system abnormality is particularly present. Mental stress invites negative energy forces, and in this case via the use of addictive drugs and lifestyle. Abnormal craniosacral mechanism caused by prenatal or natal trauma, is present with weak potency and energy and SBS compression as well as bilateral osteomastoid restrictions and lumbosacral compression. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous systems are jeopardized. The periodic nature of this illness appears to be related to cycling due to inefficient homeostatic regulation and environmental factors. Deterioration may follow progressive viral infection and autoimmune destructive process. Leaky gut syndrome caused by intestinal candida infection sensitizes the immune system towards allergens and body components. Hallucinations and delusions are produced by the combination of neurotransmitter failure, bioenergetic dysregulation and viral infection triggered by mental stress as well as spiritual and toxic factors. Spiritual forces play into the development of schizophrenic illness and therefore should be considered in treating this disorder. Nutritional approach is essential along with herbal and supplement treatment. Treatment should be holistic in nature, addressing all the abnormal mechanisms and nutritional deficiencies and establishing a new balance and homeostatic regulation pattern. The use of addictive drugs is very destructive to the progression of illness. Schizophrenia is a neurodevelopmental disorder caused by multiple factors involving body, mind and spiritual dimensions including gene mutations, heredity, viral infection, autoimmune response, leaky gut syndrome, neurotransmitter imbalance, nutritional deficiencies due to poor digestion and assimilation of nutrition. Negative energy interferes with the bioenergetic regulatory system at the craniosacral, meridian-acupuncture and chakra system.</p>
	Current Concepts & Medical Research Findings	<p>Schizophrenia is a mental disorder characterized by a breakdown of thought processes and by a deficit of typical emotional responses. Common symptoms include auditory hallucinations, paranoid or bizarre delusions, or disorganized speech and thinking, accompanied by significant social or occupational dysfunction. The greatest risk for developing schizophrenia is having a first-degree relative with the disease (risk is 6.5 percent); more than 40 percent of monozygotic twins of those with schizophrenia are also affected.²⁰ Many possible candidates have been proposed, including specific copy number variations, NOTCH4, and histone protein loci.²¹ A number of genome-wide associations, such as zinc finger protein 804A, have also been linked.²² Parenting style seems to have no major effect. Living in an urban environment during childhood or as an adult has consistently been found to increase the risk of schizophrenia by a factor of two. Other factors that play an important role include social isolation and immigration related to social adversity, racial discrimination, family dysfunction, unemployment and poor housing conditions.²³ About half of those with schizophrenia use drugs or alcohol excessively.²⁴ Evidence supports a link between earlier onset of psychotic illness and cannabis use.²⁵ There is evidence that alcohol abuse via a kindling mechanism can occasionally cause the development of a chronic substance-induced psychotic disorder, e.g., schizophrenia. The more often cannabis is used, the more likely a person is to develop a psychotic illness, with frequent use being correlated with twice the risk of psychosis and schizophrenia.²⁶ Factors such as hypoxia and infection, or stress and malnutrition in the mother during fetal development, may result in a slight increase in the risk of schizophrenia later in life. People diagnosed with schizophrenia are more likely to have been born in winter or spring (at least in the northern hemisphere), which may be a result of increased rates of viral exposures in utero.²⁰ Studies using neuropsychological tests and brain imaging technologies such as fMRI and PET to examine functional differences in brain activity have shown that differences seem to most commonly occur in the frontal lobes, hippocampus and temporal lobes.²⁸ Reductions in brain volume, smaller than those found in Alzheimer's disease, have been reported in areas of the frontal cortex and temporal lobes. Particular attention has been paid to the function</p>

SCHIZOPHRENIA (cont'd.)		of dopamine in the mesolimbic pathway of the brain. The influential dopamine hypothesis of schizophrenia proposed that excessive activation of D ₂ receptors was the cause of (the positive symptoms of) schizophrenia. The dopamine hypothesis is now thought to be simplistic, partly because newer antipsychotic medication (atypical antipsychotic medication) can be just as effective as older medication (typical antipsychotic medication), but also affects serotonin function and may have slightly less of a dopamine blocking effect. ²⁹ Low levels of glutamate receptors were found in the postmortem brains of those diagnosed with schizophrenia. ³⁰
	Synergopathic Herbal Formula	Extracts of hydrocotyle asiatica, panax ginseng, pinus sylvestris, curcuma officinalis, aeruginosa, xanthorriza, mangga, avocado, aloe vera, apple, cantaloupe, noni fruit, passiflora, pineapple, guava in sorbitol. Propolis as preservative. Contains probiotic lactobacillus acidophilus bacteria. Contains no alcohol or man-made chemicals.
MULTIPLE SCLEROSIS	Case	A 36-year-old man suffering from weakness, leg paralysis, attacks of unconsciousness, currently wheelchair-bound. He was diagnosed with multiple sclerosis by a neurologist. Examination was done by Craniosacral Telediagnosis as he did not respond to the author's interest in examining him via Facebook communication.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD MS. All CDs of pathologic processes (infection, degeneration, circulation, immunity, toxicity, hormones, neoplastic process, nutrition, spiritual dimension, tissue oxygenation) reveal abnormalities at the energetic, chemical and physical levels, indicating that the disease involved all aspects of human organs, tissues, cells and physiology. Most major acupuncture points are abnormal at bioenergetic, chemical and physical levels, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns, SBS compression, bioccipital mastoid restrictions, OA and lumbosacral compression. All physiological systems and organs are affected at the bioenergetic, chemical and structural levels. Autoimmune reactions are strongly present in most organs, notably immune system, skin, internal organs, brain, nerves, heart, arteries, veins, all endocrines. Enterovirus and influenza viruses infect the immune system, skin, all internal organs, tissues and cells as well as the genetic DNA and stem cells. Leaky gut syndrome is present, most likely caused by viral infection, intestinal candida infection and heavy metals pollution. Toxins are present in all structures of the body. Immune system is inefficient with autoimmune components. All hormones are affected, notably male hormone, steroid, pineal, thyroid, insulin, growth hormone, etc. Neurotransmitters are abnormal with normal dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B ₁₂ , due to poor digestion and absorption. Notably, intrinsic factor, digestive enzymes, and bile salts are poorly produced. High uric acid, cholesterol, triglyceride suggest abnormal metabolism. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation as well as osteoporotic changes. All nutritional components are low, notably antioxidant vitamins, vitamins B complex, C, D, K, bioflavonoids, calcium, magnesium, zinc, potassium and natrium are low. Blood sugar and creatinine are slightly elevated. Poor blood circulation and poor cellular oxygenation are noted.
	Hypothesis	Central in the development of MS is the role of viral infection, nervous sheath and mutation of the genes. Immune system abnormality is particularly present. The presence of a negative energy field and weak bioenergy system suggest the role of spiritual forces. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes is present with weak potency and energy. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. The failure of homeostatic regulatory system is obvious. Remission and deterioration may follow the waxing and waning of viral infection and autoimmune destructive process. Leaky gut syndrome, caused by intestinal candida and viral infection, sensitizes the immune system toward allergens and body components. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs may accumulate. Poor tissue and cellular oxygenation due to low vitamin B ₁₂ prevents tissue repair. Treatment should be holistic in nature addressing all the abnormal mechanisms and establishing a new balance and homeostatic regulation pattern, cellular, tissue and organ repair and regeneration and nutritional deficiencies. MS is an immune-mediated disorder mediated by a complex interaction of the individual's genetics and as yet unidentified environmental insults. ⁴ Possible targets of the immune response include myelin basic protein (MBP) and proteolipid protein (PLP). Recent data suggest a role for myelin lipids in MS. ²⁴ Virus may be responsible for triggering autoimmune response. Strong spiritual factors are present in this case but external in nature.
Current Concepts & Medical Research Findings	Multiple sclerosis (MS) is an inflammatory disease in which the fatty myelin sheaths around the axons of the brain and spinal cord are damaged, leading to demyelination and scarring as well as a broad spectrum of signs and symptoms. ³¹ Most likely MS occurs as a result of some combination of genetic, environmental and infectious factors. A number of genetic variations have been shown to increase the risk of developing the disease. ³² Possible targets of the immune response include myelin basic protein (MBP) and proteolipid protein (PLP). Recent data suggest a role for myelin lipids in MS. ³³ Disease activation biomarkers include interleukin-6, nitric oxide and nitric oxide synthase, osteopontin and fetuin-A. ³⁴ Severe stress may be a risk factor although evidence is weak. ³⁵ Smoking has also been shown to be an independent risk factor for developing MS. ³⁶ Association with occupational exposures and toxins—mainly solvents—has been evaluated, but no clear conclusions have been reached. ³⁵ Vaccinations were investigated as causal factors for the	

MULTIPLE SCLEROSIS (cont'd.)		disease; however, most studies show no association between MS and vaccines. ³⁵ Evidence for viruses as a cause includes the presence of oligoclonal bands in the brain and cerebrospinal fluid of most people with MS, human herpes viruses, measles, mumps and rubella have also been related with MS. ³¹
	Synergopathic Herbal Formula	Extracts of panax ginseng, caselpia sappan, sonchus arvensis, stachytarpetha mutabilis, isotoma longiflora, curcuma officinalis, aeruginosa, xanthorriza, mangga, avocado, aloe vera, pineapple in black honey, propolis as a preservative. Contains probiotic lactobacilus acidophilus bacteria. Contains no alcohol or man-made chemicals.
SYSTEMIC LUPUS ERYTHROMATOSUS (SLE)	Case	A 56-year-old woman, the founder of the Indonesian Lupus Association, has been diagnosed with SLE for a number years. The author performed Craniosacral Telediagnosis by viewing her picture broadcast via TV. The individual is unknown to the author. She appears to be healthy and functional, being able to climb up and down mountains.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD SLE. All CDs of pathologic processes (infection, degeneration, circulation, immunity, toxicity, hormones, neoplastic process, nutrition, spiritual dimension, tissue oxygenation) reveal abnormalities at the energetic, chemical and physical levels, indicating that the disease permeates all aspects of human organs, tissues, cells and physiology. Most major acupuncture points are abnormal at bioenergetic, chemical and physical levels, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak indicating she is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns, SBS compression, bioccipital mastoid restrictions, OA and lumbosacral compression. All physiological systems and organs are affected at the bioenergetic, chemical and structural levels. Autoimmune reactions are strongly present in most organs, notably immune system, kidneys, skin, internal organs, brain, nerves, heart, arteries, veins, intrinsic factor, all endocrines. Epstein-Barr and influenza viruses infect the immune system, skin, all internal organs, tissues and cells as well as the genetic DNA and stem cells. Leaky gut syndrome is present, most likely caused by viral infection, intestinal candida infection and heavy metals pollution. Toxins are present in all structures of the body. Immune system is inefficient with autoimmune components. All hormones are affected, notably female hormone, steroid, pineal, thyroid, insulin, growth hormone, etc. Neurotransmitters are abnormal with normal dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12, due to poor digestion and absorption. Notably, intrinsic factor, digestive enzymes, and bile salts are poorly produced. High uric acid, cholesterol, triglyceride suggest abnormal metabolism. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation as well as osteoporotic changes. All nutritional components are low, notably vitamins A, B complex, C, D, K, bioflavonoids, calcium, magnesium, zinc are low. Natrium is high and potassium is low. Poor blood circulation and poor cellular oxygenation are noted on all regions. Creatinine, blood sugar and liver enzymes are slightly elevated.
	Hypothesis	Central in the development of SLE is the role of viral infection, which triggers autoimmune reactions against most cells in the body. Immune system abnormality is particularly present. The presence of negative energy field and weak bioenergy system suggests the role of spiritual forces. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes is present with weak potency and energy. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. The failure of homeostatic regulatory system is obvious. Remission and deterioration may follow the waxing and waning of viral infection and autoimmune destructive process. Leaky gut syndrome, caused by intestinal candida and viral infection, sensitizes the immune system toward allergens and body components. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs may accumulate. Poor tissue and cellular oxygenation due to low vitamin B12 prevents tissue repair. Treatment should be holistic in nature, addressing all the abnormal mechanisms and establishing a new balance and homeostatic regulation pattern, cellular, tissue and organ repair and regeneration and nutritional deficiencies. SLE is an immune-mediated disorder mediated by a complex interaction of the individual's genetics and as yet unidentified environmental insults. Virus may be responsible for triggering autoimmune response. Strong spiritual factors are present in this case but external in nature.
	Current Concepts & Medical Research Findings	Constitutive overexpression of BAFF in BAFF-transgenic mice leads to expanded B-cell populations and polyclonal hypergammaglobulinemia. ^{37,38,39} Increased serum and/or plasma levels of BLyS have been documented in human systemic erythematosus (SLE), rheumatoid arthritis, Sjögren's syndrome and HIV infection. ⁴⁰⁻⁴³
	Herbal Formula	Extracts of panax ginseng, sonchus arvensis, stachytarpetha mutabilis, cinnamomum burmani, curcuma officinalis, xanthorriza, mangga, avocado, aloe vera, guava, pineapple in black honey, propolis as a preservative. Contains probiotic lactobacilus acidophilus bacteria. Contains no alcohol or man-made chemicals.

An Introduction to the Fascial Distortion Model (FDM)

March 17-18, 2014

Course Description

An additional model used in the diagnosis and treatment of musculoskeletal pain. This course will cover the ankle, shoulder, and knee. FDM is a model of thinking that provides a framework to view the function of the body and the expression of pain. Fascia can be viewed as the "wrapper" of our bones, muscles, and organs. Fascia is an integral part of the body's nerve network. Dr. Still identified the importance of the fascial system when seeking health. Treatments in the FDM are directed at the fascia and restoring its function by focusing on correcting distortions in the fascial system and thereby eliminating pain. The FDM provides practitioners another model in which to view the body and another tool in the battle against musculoskeletal pain. FDM expands the capability of traditional Osteopathic modalities by specifically addressing the fascia and the distortions which are identified. Treatment of the fascial distortions can provide dramatic results by addressing the Biotensegrity of the body. The FDM is driven by a patient's body language, verbal description, and the provider's underlying understanding of the fascial distortions and their impact on the whole system.

CME

16 hours of AOA Category 1-A credit are anticipated.

Course Times

Monday and Tuesday: 8:00 am - 5:30 pm
Breakfast and lunch on your own, coffee provided.

Todd A. Capistrant, DO, MHA, Program Chair

Dr. Capistrant is a board-certified Family Medicine physician specializing in Osteopathic Manipulation. He has been with Tanana Valley Clinic in Fairbanks, AK, since 2006, where he first began attending to patients in their 1st Care Center. In June 2013 he was selected as the Medical Director of Tanana Valley Clinic and oversees the thirteen different departments that comprise the clinic. Dr. Capistrant received a B.S. in Biology from the University of Minnesota and a D.O. at Des Moines University in Iowa. In addition to his medical education, Dr. Capistrant received a master's degree in Healthcare Administration from Des Moines University in Iowa. He is one of three physicians in the U.S. certified to teach seminars on the FDM model.



Course Location

The Broadmoor

1 Lake Avenue, Colorado Springs, CO 80906
Reservations: 7am to 9pm (MT), seven days a week. (800) 634-7711 (Mention AAO event.)
<https://resweb.passkey.com/go/aa014>

Click here to register online.

Osteopathic Approach to Common ENT Complaints of Children

March 17-18, 2014

Course Description

This course is designed for participants with intermediate to advanced skills in OMM and those who have taken intermediate level Cranial courses. We will take an in-depth look at the anatomical and structural influences of the pediatric ENT patient, taking a close look at the cranial and facial anatomy and its influences on health and function of the middle ear, sinuses, and temporomandibular joint.

CME

16 hours of AOA Category 1-A credit are anticipated.

Course Times

Monday and Tuesday: 8:00 am - 5:30 pm
Breakfast and lunch on your own, coffee provided.

Course Location

The Broadmoor

1 Lake Avenue, Colorado Springs, CO 80906
Reservations: 7am to 9pm (MT), seven days a week. (800) 634-7711 (Mention AAO event.)
<https://resweb.passkey.com/go/aa014>

Click here to register online.

Heather P. Ferrill, DO, Program Chair

Dr. Ferrill, a 2000 Michigan State University College of Osteopathic Medicine graduate, is an Associate Professor of Osteopathic Manipulative Medicine (OMM) at the Rocky Vista University College of Osteopathic Medicine (RVUCOM). Board-certified in Family Practice and Neuromusculoskeletal Medicine/OMM, her practice emphasizes Osteopathic Manipulative Treatment in the pediatric population. She serves on the AAO Board of Governors and the Education Committee.



Register online at www.academyofosteopathy.org. For travel arrangements, Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or globallyyourstravel@cox.net.



VITILIGO	Case	A 55-year-old man with progressive vitiligo during the last six years. No medical treatment succeeded in stopping the progression and improving pigmentation. He also has hypertension, high uric acid, cholesterol and triglyceride and obesity. He works as a photographer.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD VII. All CDs of pathologic processes (infection, degeneration, circulation, immunity, toxicity, hormones, neoplastic process, nutrition, spiritual dimension, tissue oxygenation) reveal abnormalities at the energetic, chemical and physical levels, indicating that the disease involved all aspects of human organs, tissues, cells and physiology. Most major acupuncture points are abnormal at bioenergetic, chemical and physical levels, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns and weak energy system. All physiological systems and organs are affected at the bioenergetic, chemical and structural levels, Autoimmune reactions are strongly present in most organs, notably immune system, skin, internal organs, brain, nerves, heart, arteries, veins, all endocrines. Unknown virus and influenza virus infects the immune system, skin, all internal organs, tissues and cells as well as the genetic DNA and stem cells. The depigmented areas are infected with the unknown virus. Leaky gut syndrome is present, most likely caused by viral infection, intestinal candida infection and heavy metals pollution. Toxins are present in all structures of the body. Immune system is inefficient with autoimmune components. All hormones are affected, notably male hormone, steroid, pineal, thyroid, insulin, growth hormone, etc. Neurotransmitters are abnormal with normal dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12 due to poor digestion and absorption. Notably, intrinsic factor, digestive enzymes, and bile salts are poorly produced. High uric acid, cholesterol, triglyceride suggest abnormal metabolism. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation as well as osteoporotic changes. Tissue uric acid is estimated at 8.5, Cholesterol 230, triglyceride 280, blood sugar 130, creatinine 0.9, SGOT 40. All nutritional components are low, notably antioxidants, vitamins B complex, D and K, calcium, magnesium, zinc, potassium, sodium are low. Poor blood circulation and poor cellular oxygenation are noted. As it turned out, a negative energy field emanating from an old grave behind the house was detected. Elimination of this negative energy field by energy technique and spiritual-religious method resulted in the disappearance of negative energy in the body bioenergy system.
	Hypothesis	Central in the development of vitiligo is the role of viral infection of an unknown identity, which triggers cellular degeneration, especially the skin melanocytes and autoimmune reactions. Immune system abnormality is particularly present. The presence of a negative energy field and weak bioenergy system suggest the role of spiritual forces. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes is present with weak potency and energy and SBS compression and lumbosacral compression. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. The failure of homeostatic regulatory system is obvious. Remission and deterioration may follow the waxing and waning of viral infection and autoimmune destructive process. Leaky gut syndrome caused by intestinal candida and viral infection sensitizes the immune system towards allergens and body components. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs may accumulate. Nutritional approach is essential along with herbal and supplement treatment. Poor tissue and cellular oxygenation due to low vitamin B12 prevents pigmentation and tissue repair. Treatment should be holistic in nature, addressing all the abnormal mechanism and establishing a new balance and homeostatic regulation pattern, cellular, tissue and organ repair and regeneration and nutritional deficiencies. Vitiligo is a systemic disease caused by autoimmune reactions against body components, particularly the skin melanocytes. Strong spiritual factors are present in this case but external in nature.
	Current Concepts & Medical Research Findings	A genome-wide association study found 10 independent susceptibility loci for generalized vitiligo, responsible for 7.4 percent of the genetic risk. TYR encodes tyrosinase, which is not a component of the immune system, but is an enzyme of the melanocyte that catalyzes melanin biosynthesis, and a major autoantigen in generalized vitiligo. ⁴⁴ A study comparing 656 people with and without vitiligo in 114 families found several mutations (single-nucleotide polymorphisms) in the NALP1 gene. The NALP1 gene, which is on chromosome 17 located at 17p13, is on a cascade that regulates inflammation and cell death, including myeloid and lymphoid cells, which are white cells that are part of the immune response. ⁴⁵
	Synergopathic Herbal Formula	Extracts of alpina galanga, aloe vera, caselpia sappan, curcuma officinalis, aeruginosa, xanthorrhiza, mangga, avocado, aloe vera, pineapple, guava in sorbitol, propolis as preservative and natural alcohol 4% in glycerin. Use as a local herbal formula to apply on the depigmented areas.

IDIOPATHIC THROMBOCYTOPENIC PURPURA (ITP)	Case	A 52-year-old man experiencing lassitude, paleness, palpitation and petechial rash of two months duration. Recent platelet count revealed 15,000, necessitating a platelet transfusion. Upon discharge from the hospital, he was prescribed a steroid drug, an antibiotic and multivitamins.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD ITP. All CDs of pathologic processes reveal abnormalities at the energetic, chemical and physical levels, indicating that the disease involved all aspects of human organs and physiology. Most major acupuncture points are abnormal at bioenergetic, chemical and physical levels, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns and weak energy system. All physiological systems and organs are affected at the bio-energetic, chemical and structural levels. Autoimmune reactions are strongly present in most organs, notably immune system, bone marrow, blood cells (particularly thrombocytes), blood stem cells, skin, internal organs, brain, nerves, heart, arteries, veins, all endocrines and the intrinsic factor. Epstein-Barr, flu virus infects the immune system, skin, all internal organs, tissues and cells as well as the genetic DNA and stem cells. Leaky gut syndrome is present, most likely caused by viral infection, intestinal candida infection and heavy metals pollution. Toxins are present in all structures of the body. Immune system is inefficient with autoimmune components. All hormones are affected, echo virus notably male hormone, steroid, pineal, thyroid, insulin, growth hormone, etc. Neurotransmitters are abnormal with normal dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12, due to poor digestion and absorption. Notably, intrinsic factor, digestive enzymes, and bile salts are poorly produced. High uric acid, cholesterol, triglyceride suggest abnormal metabolism. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation as well as osteoporotic changes. Tissue uric acid is estimated at 10.5, Cholesterol 230, triglyceride 2560, blood sugar 130, creatinine 0.9, SGOT 20. All nutritional components are low, notably antioxidants, vitamins B complex, D and K, calcium, magnesium, zinc, potassium and sodium are low. Poor blood circulation and poor cellular oxygenation are noted. As it turned out, a negative energy field emanating from an old tree in front of the house was detected. Lab result: thrombocyte was low, anemic, leukopenia.
	Hypothesis	Central in the development of ITP is the role of viral infection, probably Epstein-Barr, which triggers cellular degeneration and autoimmune reactions, particularly toward the blood cells, especially thrombocytes, skin, connective tissues, skin, brain and nerve cellular components and many organs. Immune system abnormality is particularly present. The presence of negative energy field and weak bioenergy system suggests the role of spiritual forces. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes is present with weak potency and energy and SBS compression and lumbosacral compression. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. The failure of homeostatic regulatory system is obvious. Remission and deterioration may follow the waxing and waning of viral infection and autoimmune destructive process. Leaky gut syndrome, caused by intestinal candida and viral infection, sensitizes the immune system toward allergens and body components. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs may accumulate. Nutritional approach is essential along with herbal and supplement treatment. Treatment should be holistic in nature addressing all the abnormal mechanism and establishing a new balance and homeostatic regulation pattern, cellular, tissue and organ repair and regeneration. ITP is a systemic disease caused by autoimmune reactions against body components, particularly thrombocytes, megakaryocytes, blood stem cells, bone marrow. Strong spiritual factors are present in this case but external in nature.
	Current Concepts & Medical Research Findings	Idiopathic thrombocytopenic purpura (ITP) is characterized by petechial rash associated with an abnormally low platelet count of unknown cause. A very low platelet count carries an increased risk of bleeding and purpura. ITP is diagnosed by a low platelet count in a complete blood count (a common blood test). Additional investigations (such as a bone marrow biopsy) may be necessary in some cases. In approximately 60 percent of cases, antibodies against platelets can be detected. ⁴⁶ Most often these antibodies are against platelet membrane glycoproteins IIb-IIIa or Ib-IX, and are of the immunoglobulin G (IgG) type and some renowned research established the immune pathogenesis of ITP. ⁴⁷ The coating of platelets with IgG makes them susceptible to opsonization and phagocytosis by splenic macrophages, as well as by Kupffer cells in the liver. The IgG autoantibodies are also thought to damage megakaryocytes. ⁴⁷ Recent research indicates that impaired production of the glycoprotein hormone thrombopoietin, which is the stimulant for platelet production, may be a contributing factor:
	Synergopathic Herbal Formula	Extracts of panax ginseng, caselpia sappan, camelia sinensis, sonchus arvensis, stachytarpetha mutabilis, pinus sylvestris, curcuma officinalis, aeruginosa, xanthorhiza, mangga, avocado, aloe vera, pineapple, guava in sorbitol, propolis as preservative. Contains probiotic lactobacillus acidophilus bacteria. Contains no alcohol or man-made chemicals.

DIABETES MELITUS TYPE 2	Case	A 63-year-old man suffering from diabetes melitus type 2 during the last 15 years. There is a family history of hypertension and DM, type 2. He has a history of high uric acid, cholesterol, LDL and triglycerides. He recently underwent cardiac surgery for three rings placement. He is maintained on short term insulin and long term insulin to keep his blood sugar level normal. In the past he also received OADS and a cholesterol-reducing drug.
	Findings	This individual shows positive Upledger-Pribadi's sign at the CD DM type 2 and CDHYT. All CDs of pathologic processes (infection, degeneration, circulation, immunity, toxicity, hormones, neoplastic process, nutrition, spiritual dimension, tissue oxygenation) reveal abnormalities at the energetic, chemical and physical levels, indicating that the disease involved all aspects of human organs, tissues, cells and physiology. Most major acupuncture points are abnormal at bioenergetic, chemical and physical levels, indicating failure of the bioenergy system. All chakras, aura are poorly developed. EMF shield is weak, indicating he is easily influenced by environmental EMF. Strong negative energy and weak spiritual force are detected. The craniosacral system is not operating due to stress patterns, SBS compression, OA and lumbosacral compression. All physiological systems and organs are affected at the bioenergetic, chemical and structural levels. Autoimmune reactions are strongly present in most organs, notably immune system, pancrea, intrinsic factor, eyes, skin, internal organs, brain, nerves, heart, arteries, veins, all endocrines. Enterovirus and influenza viruses infect pancreas and the immune system, skin, all internal organs, tissues and cells as well as the genetic DNA and stem cells. Leaky gut syndrome is present, most likely caused by viral infection, intestinal candida infection and heavy metals pollution. Toxins are present in all structures of the body. Immune system is inefficient with autoimmune components. All hormones are affected, notably male hormone, steroid, pineal, thyroid, insulin, growth hormone, etc. Neurotransmitters are abnormal with normal dopamine, low serotonin, acetylcholine, GABA. Polyneuropathy most likely due to deficiency of B complex, especially vitamin B12, due to poor digestion and absorption. Notably, intrinsic factor, digestive enzymes and bile salts are poorly produced. Normal uric acid, cholesterol, triglyceride with medications. Deficiency in most vitamins, minerals and amino acids due to poor digestion results in abnormal metabolism and ineffective neurotransmitter production and regulation as well as osteoporotic changes. All nutritional components are low, notably vitamins A, B complex, C, D, E, K, bioflavonoids, calcium, magnesium, zinc, potassium are low. Natrium is high. Low cardiac blood circulation and cellular oxygenation are noted, otherwise normal. Cellular insulin sensitivity is poor, endogenous production: 60 percent. Langerhans activity: 60 percent. Creatinine is normal.
	Hypothesis	The role of viral infection in the pancreas cannot be ignored. Influenza virus is present in most parts of the body. Immunity is low. Autoimmune response to most organs, tissue, cells (especially Langerhans cells), intrinsic factor, retina is noted. Leaky gut syndrome, caused by intestinal candida and viral infection, sensitizes the immune system toward allergens and body components. Toxins from virus, candida, heavy metals, toxic metabolites and chemical drugs may accumulate. The presence of a negative energy field and weak bioenergy system suggests the role of spiritual forces. Abnormal craniosacral mechanism caused by structural bone and connective tissue changes is present with weak potency and energy and SBS compression and lumbosacral compression. Combined with poor assimilation of neurovitamins and antioxidant vitamins, the central and autonomic nervous system are jeopardized. The failure of homeostatic regulatory DM type 2 is probably an immune-mediated disorder affecting the pancreatic islet cells mediated by a complex interaction of the individual's genetics and life style factors. Virus may be responsible for triggering autoimmune response. Strong spiritual factors are present in this case but external in nature.
	Current Concepts & Medical Research Findings	Diabetes mellitus is a group of metabolic diseases in which a person has high blood sugar, either because the pancreas does not produce enough insulin, or because cells do not respond to the insulin that is produced. ⁴⁸ Type 1 diabetes mellitus is characterized by loss of the insulin-producing beta cells of the islets of Langerhans which is a T-cell-mediated autoimmune attack in the pancreas. Type 1 diabetes is partly inherited, and then triggered by certain infections, with some evidence pointing at Coxsackie B4 virus. A genetic element in individual susceptibility to some of these triggers has been traced to particular HLA genotypes. Type 2 diabetes mellitus is characterized by insulin resistance, which may be combined with relatively reduced insulin secretion. ² Type 2 diabetes is due primarily to lifestyle factors and genetics. ⁴⁹
	Synergopathic Herbal Formula	Extracts of panax ginseng, caselpia sappan, cataranthus rosea, camelia sinensis, sonchus arvensis, stachytarpetha mutabilis, tinospora crispa, tribulus terrestris, isotoma longiflora, curcuma officinalis, xanthorrhiza, mangga, avocado, aloe vera, pineapple, avocado in black honey with royal jelly, propolis as a preservative. Contains probiotic lactobacilus acidophilus bacteria.

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Potential New Dimensions in Dermatology: The Osteopathic Approach to Cutaneous Disease

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Abstract

Cutaneous disorders such as acne, psoriasis, chronic wounds, hyperhidrosis, atopic dermatitis and scleroderma are often difficult to treat because of complex pathological mechanisms. Current theories link these disorders to physiological disturbances such as localized tissue congestion, stress-induced inflammation and imbalance of the autonomic nervous system. Osteopathic manipulative medicine (OMM) has always had a home in the primary care sector, but growing research on the physiologic effects of osteopathic manipulative therapy on the body has now opened the door for its use in many other fields of medicine, including dermatology. Application of osteopathic manipulative treatment (OMT), such as myofascial release, rib raising, lymphatic drainage, and cranial osteopathic manipulative techniques aim to restore balance and to aid in long-term management of dermatological disorders. Osteopathic manipulative treatment will be most useful when combined with current conventional therapeutic options. However, randomized, well-controlled studies are necessary to confirm such therapeutic benefits.

Contrary to current concepts, dermatology does not compromise osteopathic principals, but rather has the potential to exemplify those ideals.

Introduction

Osteopathic manipulative medicine (OMM) has long been associated with the sector of primary care and has, over the years, shown to be extremely beneficial in the treatment of musculoskeletal disorders such as somatic dysfunctions of the cervical, thoracic or lumbar spine, radial or fibular heads, and carpal tunnel syndrome. However, as osteopathic physicians continue to grow in number and find their way into other specialties outside of the family practice and primary care spectra, it is important to continue to explore the role that Osteopathic manipulative treatment (OMT), a cornerstone of osteopathic medicine, could have in this transition. Campbell et al.¹ demonstrate how OMT can be used in the treatment of notalgia paresthetica, brachioradialis pruritis, trigeminal neuralgia, elephantiasis nostras verrucosa and stasis dermatitis. In this article, the authors aim to demonstrate how

similar techniques can be applied to other dermatologic diseases that may improve patient management. Finally, it aims to demonstrate that dermatology is a specialty that exemplifies many aspects of osteopathic medical practice. The effectiveness of many of these treatment modalities remains to be demonstrated in clinical trials. But the subtext here is that additionally, allopathic physicians should be encouraged to incorporate them into their practices.

Osteopathic Manipulative Medicine and Dermatologic Disease

Many dermatologic disorders present with a myriad of treatment challenges that can be frustrating for both physicians and patients. The majority of current treatment modalities focus on either topical or systemic pharmaceutical agents, most of which come with a host of side effects and delayed benefits. Topical ointments, creams and lotions often leave patients with dry skin, photosensitivity, skin atrophy, etc., while oral medications can result in gastrointestinal discomfort, Cushingoid appearance, liver toxicity or a weakened immune system. There currently is a lack of research concerning the use of osteopathic manipulations in the treatment of dermatological disorders. However, emerging breakthroughs in the pathology of cutaneous diseases along with clinical evidence supporting the use of OMM in disorders with similar mechanisms set the stage for refreshing and cutting-edge treatment plans. A summary of the application of OMT to a number of dermatologic diseases is presented in *Table 1*.

Acne. Acne vulgaris is one of the most common skin disorders, affecting adolescents and adults alike.² It is an inflammatory disorder characterized by areas of skin with seborrhea, comedones, papules, pustules and nodules and can potentially result in hyperpigmentation and permanent scarring.² In addition to physical blemishes, prolonged struggles with acne have been commonly linked to psychological disturbances.² Tidman² finds that complications of acne vulgaris can include both physical and emotional scarring. Disfigurement from inflammation, as well as pigmentation changes and scarring often cause embarrassment, can undermine confidence and lower self-esteem. Acne can induce more serious psychological distress, resulting in anxiety, depression,

Table 1. Summary of Dermatological Diseases and Applications of OMT

Disease	Clinical Features	Pathophysiology	Suggested Treatment	Rationale
Acne	Seborrhea, comedones, papules, pustules and nodules	<i>P. acnes</i> , excess androgens, stress, diet and genetics	Myofascial release, rib raising, cranial osteopathic manipulative medicine and facial effleurage	Normalize autonomic nervous system output and normalize lymphatic flow to reduce inflammation
Psoriasis	Sharply demarcated, erythematous, raised lesions covered with a silvery white scale, commonly affecting the extensor surfaces of the knees, elbows, trunk and scalp	Stress, genetics	Rib raising and cranial osteopathic manipulative medicine	Normalize autonomic nervous system output
Chronic wounds	Wounds that fail to heal or heal then reappear	Lymphatic and venous insufficiency	Lymphatic techniques (pedal pump, thoracic pump, effleurage and pectoral lift)	Removal of blockage of lymphatic and venous flow
Hyperhidrosis	Excessive sweating at the palms, maxillae and soles	Heritable hyper functioning of sudomotor sweat control system	Cranial osteopathic manipulative medicine and rib raising	Normalize excessive sympathetic output to sudomotor sweat control system
Atopic dermatitis	Xerosis, lichenification, and eczematous lesions. Excoriations and crusting are common.	Genetic loss of function mutation in filaggrin, infection with <i>S. aureus</i> , and autonomic nervous system dysfunction	Cervical myofascial release, cranial osteopathic manipulative medicine and rib raising	Normalize the excessive sympathetic and parasympathetic tone
Scleroderma	Damage to the cells lining the walls of small arteries, dilation of lymphatic vessels, destruction of lymphatic vessels, and an abnormal buildup of scar tissue either locally or systemically	Autoimmunity and genetic mutations	Lymphatic techniques (pedal pump, thoracic pump, effleurage and pectoral lift)	Increased clearance of lymphatic fluid

and social withdrawal. The pathogenesis of this disorder is a complex interaction of multiple factors, both internal and external to the pilosebaceous unit, including infection with the Gram positive bacteria *Propionibacterium acnes*, excess androgen secretion, high glycemic load diets, and polymorphism in TNF- α (tumor necrosis factor-alpha), IL-1 (interleukin-1), and CYP1A1 (Cytochrome P450, family 1, subfamily A, polypeptide 1) expression.³⁻⁶ Acne vulgaris may furthermore be exacerbated by stress,^{2,3,7-9} by greasy topical preparations that encourage blockage of the pores, by trauma or a humid climate.²

Current treatment methods include topical retinoids, oral isotretinoin, topical and oral antibiotics, oral contraceptives and laser or light therapy. However,

given the strong correlation between the worsening of acne and increased stress hormone levels, it can be inferred that OMT techniques that decrease sympathetic nervous system responses and relax the mind and body would be beneficial additives to these treatment protocols. As such, myofascial release, rib raising at T1-4 or cranial osteopathic manipulative medicine would be beneficial, as would be techniques that decrease inflammation such as facial effleurage. The use of rib raising techniques decreases somatic dysfunction in that area of the sympathetic chain ganglion, and thus normalize excess autonomic output.^{10,11}

Compression of the fourth ventricle (CV-4), a cranial OMT maneuver, also restores proper autonomic

response by means of manipulation of the skull sutures, as well as enhancing fluid exchange.¹² Furthermore, a lymphatic technique, facial effleurage, may help to calm some of the inflammation seen in acne patients. Such lymphatic techniques have been linked to the mobilization of inflammatory mediators into the circulation.¹³

Psoriasis. Psoriasis is a multisystem, chronic, inflammatory disorder in which patients experience repeated bouts of red, pruritic, scaly patches of skin. The most common form of psoriasis, plaque psoriasis, is characterized by sharply demarcated, erythematous, raised lesions covered with silvery white scales that commonly affects the extensor surfaces of knees, elbows, trunk, and scalp. The pathogenesis of psoriasis involves genetic and environmental factors. Among these influences, emotional stress is considered to play an especially important role in its onset and exacerbation.¹⁴ It has been proposed that activated TH1 cells are recruited into the skin and secrete inflammatory IFN γ (interferon gamma) which in turn induces local antigen-presenting cells to secrete IL-1 and IL-23 to promote the expansion of IL-17 expressing CD (cluster of differentiation)4+ and CD8+ T cells.¹⁵ The pathogenesis of psoriasis, similar to atopic dermatitis, has been linked to a blunted HPA (hypothalamus-pituitary-adrenal) axis in psoriatics sensitive to psychological stressors.¹⁶ Current treatment modalities include topical corticosteroids, Vitamin D analogues, Anthralin, topical retinoids, oral methotrexate, oral cyclosporine, calcineurin inhibitors, salicylic acid, coal tar and moisturizers. However, similarity to the role that the disruption of the autonomic nervous system plays in the exacerbation of both acne vulgaris and psoriasis, suggests OMT treatment modalities previously stated for acne vulgaris would also help psoriatic patients. These treatments include rib raising and craniosacral techniques.

Chronic Wounds. Chronic wounds are classified as those that fail to proceed through the healing process in an orderly manner and that last for extended periods of time or occur repetitively.^{17,18} These wounds are due to a number of factors, but are most commonly linked to atherosclerosis, diabetes mellitus, hypertension and venous insufficiency, with incidence increasing with age and obesity.¹⁷⁻¹⁹ Proper wound healing, a rebuilding of disrupted anatomic architecture, is initiated by platelet-induced inflammation and carried out by cellular infiltration with neutrophils, macrophages, T lymphocytes, fibroblasts and endothelial cells.

Problems arise when such mediators cannot reach sites of inflammation. Chronic venous insufficiency

and lymphatic insufficiency are associated with chronic ulcers. A breakdown in the lymphatic system predisposes to infection and compromises wound healing.²⁰⁻²³ Furthermore, Macdonald and Mayrovitz²² find that managing lymphedema at a wound site enhances the wound-healing process in individuals with and without venous insufficiency, further strengthening the link between proper lymphatic flow and wound healing.

Current treatment protocols for chronic wounds include hyperbaric oxygen therapy, infectious disease management, nutrition, pain management, surgery and education. However, due to the important relationship between proper lymphatic flow, blood flow and wound healing, it can be hypothesized that OMT aimed at improving lymphatic flow will help in the prevention of chronic wounds.^{24,25} These techniques include the pedal pump, thoracic pump, effleurage and pectoral lift.

Hyperhidrosis and atopic dermatitis.

Hyperhidrosis is a common disorder that causes hyper functioning of the sudomotor sweat control system. This results in increased sweat secretion at the palms, axillae and soles.²⁶ Primary hyperhidrosis appears in adolescence and is thought to be an autonomic dominant disorder.²⁷ Secondary hyperhidrosis, however, is caused by other medical conditions. The exact pathophysiology of hyperhidrosis is under investigation. However, a lack of sweating at night suggests a strong emotional component.²⁸ Additional research points to localized hyper-functioning of sympathetic fibers passing through the T2 and T3 ganglia.²⁹ Atopic dermatitis is a dermatologic condition characterized by xerosis, lichenification, and eczematous lesions.³⁰ The pathogenesis of the disease has been linked to a genetic loss-of-function mutation in filaggrin, infection with *S. aureus*, and most recently, an autonomic nervous system dysfunction.³¹ Another study finds that atopic subjects exhibit an overactive sympathetic response to itching and scratching, while the parasympathetic tone is persistently and rigidly elevated, indicating a lack of adaptability in response to stress.³¹

Current treatment for hyperhidrosis includes prescription and over-the-counter antiperspirants, iontophoresis, oral medications and botulinum toxin injections. Those for atopic dermatitis are equally varied and include topical corticosteroid creams, antibiotics, oral antihistamines, phototherapy and immunomodulators. However, OMT techniques such as craniosacral and rib raising, which target the autonomic nervous system, may aid in treating these patients.

Sympathetic nerve fibers emerge from thoracolumbar vertebrae, and their ganglia lie in the paravertebral region. Due to the proximity of the sympathetic ganglion, OMT directed toward the vertebral bodies and ribs protruding from them may normalize sympathetic output at the level of the ganglion. Occipital release, a form of myofascial release, may also be useful, as it augments the output of the parasympathetic nervous system and may help to restore balance. Finally, cranial manipulation may also have effects on the output of sympathetic activity.¹

Scleroderma. Scleroderma is a rare disease marked by damage to the cells lining the walls of small arteries and an abnormal buildup of scar tissue.³² This disorder can be localized to the hands and face or cause systemic sclerosis and be associated with calcinosis, Raynaud's phenomenon, esophageal motility dysfunction, sclerodactyly and telangiectasia. The pathogenesis of scleroderma is not known but has been attributed to autoimmunity with a genetic abnormality triggered by possible environmental factors.³³ Current research has also noted that sclerotic cutaneous lesions show selective dilation of some lymphatic vessels and destruction of others.³³ While the reason for this selectivity is not known, a strong correlation exists between these findings and the edematous phase and subsequent fibrosis.³²⁻³⁴

It has been postulated that dilation of these lymphatic vessels overloads the lymphatics via either an increase in interstitial fluid due to the pathologic process and/or the overall reduced capacity of lymph drainage caused by the decreased number of lymph vessels.³³ As such, it can be postulated that the use of OMT techniques, such as the pedal pump, pectoral lift, effleurage and thoracic pump could aid in the clearance of lymphatic fluid and thus delay the progression of disease.

Conclusion

As the field of osteopathic medicine continues to grow and expand, it is only natural that osteopathic physicians will continue to enter other specialties and bring with them unique treatment modalities to physiological diseases. As discussed, one such field of medicine in which the osteopathic approach has the potential to be extremely useful is dermatology.

The authors maintain that common dermatologic conditions such as acne vulgaris, psoriasis and atopic dermatitis, as well as other disorders, including chronic wounds, hyperhidrosis, and scleroderma, can be treated as effectively if not more effectively through this integration of OMT into dermatology, as commonly

practiced. Though the authors have not had direct experience with patients with dermatologic disorders, they believe that through this union, physicians will be able to provide the ultimate in comprehensive patient care. Further studies concerning the application of OMT in the treatment of dermatologic disorders are needed in order to confirm such benefits.

Finally, it must be emphasized that dermatology is a clinical specialty that exemplifies the best aspects of the osteopathic medical profession.³⁵ In fact, allopathic physicians should be encouraged to incorporate such approaches in their own treatment practices. They may be missing major effective modalities in their usual approach to dermatologic disorders.

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AAOJ Submission Checklist

Manuscript Submission

- Submission emailed to AAOJ Scientific Editor at editoraaoj@gmail.com or mailed on CD-ROM to the AAOJ Managing Editor, American Academy of Osteopathy, 3500 DePauw Boulevard, Suite 1080, Indianapolis, IN 46268
- Manuscript formatted in Microsoft Word for Windows (.doc), text document format (.txt) or rich text format (.rtf)

Manuscript Components

- Cover letter addressed to the AAOJ Scientific Editor, Kate McCaffrey, DO, with any special requests (e.g., rapid review) noted and justified
- Title page, including the authors' full names and financial or other affiliations, as well as disclosure of the financial support related to original research described in the manuscript
- "Abstract" (see "Abstract" section in "AAOJ Instructions for Contributors" for additional information)
- "Methods" section
 - the name of the public registry in which the trial is listed, if applicable
 - ethical standards, therapeutic agents or devices, and statistical methods defined
- Four multiple-choice questions for the continuing medical education quiz and brief discussions of the correct answers
- Editorial conventions adhered to
 - units of measure given with all laboratory values
 - on first mention, all abbreviations other than measurements placed in parentheses after the full names of the terms, as in "American Academy of Osteopathy (AAO)"
- Numbered references, tables and figures cited sequentially in the text
 - journal articles and other material cited in the "References" section follow the guidelines described in the most current edition of the *AMA Manual of Style: A Guide for Authors and Editors*.
 - references include direct, open-access URLs to posted, full-text versions of the documents
 - photocopies provided for referenced documents not accessible through URLs
- "Acknowledgements" section with a concise, comprehensive list of the contributions made by

individuals who do not merit authorship credit and permission from each individual to be named in print

- For manuscripts based on survey data, a copy of the original validated survey and cover letter

Graphic Elements

- Graphics should be formatted as specified in the "Graphic Elements" section of "AAOJ Instructions for Contributors"
- Graphics should not be included with text but sent as separate graphic files (e.g. jpg, tiff, pdf)
- Each graphic element cited in numerical order (e.g., *Table 1*, *Table 2*, and *Figure 1*, *Figure 2*) with corresponding numerical captions in the manuscript
- For reprinted or adapted tables, figures and illustrations, a full bibliographic citation given, providing appropriate attribution

Required Legal Documentation

- For reprinted or adapted tables, figures and illustrations, permission to reprint from the publisher in the AAOJ print and online versions accompanied by photocopies of the original work
- For photographs in which patients are featured, signed and dated "Patient-Model Release" forms submitted
- For named sources of unpublished data and individuals listed in the "Acknowledgments" section, permission to publish their names in the AAOJ obtained.
- For authors serving in the U.S. military, the armed forces' approval of the manuscript and institutional or military disclaimers submitted

Financial Disclosure and Conflict of Interest

Authors are required to disclose all financial and non-financial relationships related to the submission's subject matter. All disclosures should be included in the manuscript's title page. See the "Title page" section of "AAOJ Instructions to Contributors" for examples of relationships and affiliations that must be disclosed. Those authors who have no financial or other relationships to disclose must indicate that on the manuscript's title page (e.g., "Dr Jones has no conflict of interest or financial disclosure relevant to the topic of the submitted manuscript").

Publication in JAOA

Please include permission to forward all manuscripts to the *Journal of the American Osteopathic Association* if the Editor deems a manuscript not suited to the current needs of the AAOJ.

Questions? Contact Dr. Kate McCaffrey, Scientific Editor, at kmccaffrey@westernu.edu.

Component Societies and Affiliated Organizations

Calendar of Upcoming Events

December 14, 2013

*Gentle Techniques for the Upper Body:
Head, Neck, and Thorax*

Course Director: R. Paul Lee, DO, FAAO, FCA
Rocky Vista University

College of Osteopathic Medicine, Parker, CO

CME: 4 Category 1-A AOA credits anticipated

Website: 2dockanze.wix.com/rockymtnaao#!events/crrl

April 10-13, 2014

Orthopedic Neurology

Course Director: Maurice Bensoussan, MD, DO, FCA

Associate Director: R. Paul Lee, DO, FAAO, FCA

Holiday Inn, Lake Buena Vista, FL

Phone: (317) 581-0411 Fax: (317) 580-9299

Email: info@cranialacademy.org

Website: www.cranialacademy.org

February 15-19, 2014

*Midwinter Introductory Course in Osteopathy in the
Cranial Field*

Course Director: Zina Pelkey, DO

Holiday Inn, Lake Buena Vista, FL

CME: 40 Category 1-A AOA credits anticipated

Phone: (317) 581-0411 Fax: (317) 580-9299

Email: info@cranialacademy.org

Website: www.cranialacademy.org

June 14-18, 2014

June Introductory Course in Osteopathy in the Cranial Field

Course Director: Eric J. Dolgin, DO, FCA

Sheraton Indianapolis City Centre, Indianapolis, IN

Phone: (317) 581-0411 Fax: (317) 580-9299

Email: info@cranialacademy.org

Website: www.cranialacademy.org

February 21-23, 2014

Key Elements in Effective Osteopathic Practice

Course Director: Rachel Brooks, MD

Holiday Inn, Lake Buena Vista, FL

Phone: (317) 581-0411 Fax: (317) 580-9299

Email: info@cranialacademy.org

Website: www.cranialacademy.org

June 19-22, 2014

*Osteopathic Cranial Academy Annual Conference: Beyond
Sutherland's Minnow: Anatomy, Perception and Treatment*

Conference Director: Melvin R. Friedman, DO

Sheraton Indianapolis City Centre, Indianapolis, IN

Phone: (317) 581-0411 Fax: (317) 580-9299

Email: info@cranialacademy.org

Website: www.cranialacademy.org